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GREENSVILLE DOWELL, M. D., Editor,

PROFESSOR OF ANATOMY IN GALVESTON MEDICAL COLLEGE, SURGEON TO CITY AND MARINE HOSPITAL.

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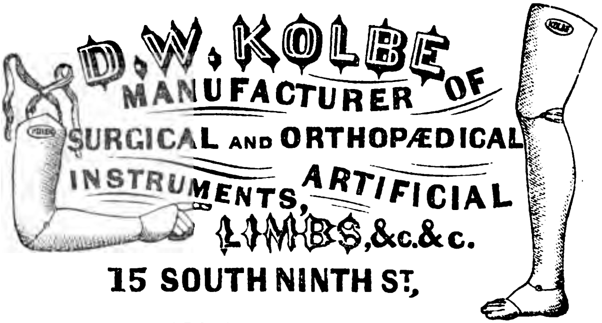

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Change of Editors.

The undersigned having purchased all pecuniary interest in the Texas Medical Journal, will continue the publication of the "Galveston Texas Medical Journal," on the same liberal terms of the old Journal, and the price will be the same. The first number of the Texas Medical Journal was never issued, owing to the death of one of the editors and publishers, we thought it best to send it out as the first number of the new series, so that the pages will be correct for a new volumn. The editorials will be furnished by the different editors, but we will have control of all the subscription books, and will occasionally give original articles as before.

GREENSVILLE DOWELL, M. D.,
Publisher Galveston Texas Medical Journal.

◆

The Galveston Texas Medical Journal.

By a recent arrangement, The "Galveston" and "Texas" Medical Journals have been merged, and will henceforth be published under the auspices of the Faculty of the Galveston Medical College.

The "Galveston Texas Medical Journal" will be published monthly, 8vo. size, and will contain about fifty pages. No pains or means will be spared which may be necessary, to make the Journal one of interest and value to the profession.

Terms, five dollars per annum, currency, cash in advance, unless satisfactory arrangements are made on time. It is impossible, in the present state of the country, to furnish the work on time. Subscribers, who have paid for the "Galveston Medical

Journal," or the "Texas Medical Journal," will be furnished with the new issue to the full extent of time to which they have paid.

The present number of the "Texas Medical Journal" is sent in lieu of the January number of the new Journal, and the first issue of the new will be forthcoming on the first of February, after which it will be regularly published on the first of each month.

We earnestly request the profession, especially those of Texas, to aid us in sustaining this undertaking. The importance of a well conducted Medical Journal, in Texas, will be doubted by none. Will the profession sustain us? We pledge ourselves, to the extent of our resources, to make the Journal what it should be. All communications on business, or containing remittances, should be addressed to Prof. G. Dowell, M. D. Matter for publication, etc., should be directed to the Editors.

J. BORING, M. D., Senior Editor.
T. J. HEARD, M. D., }
W. D. KELLEY, M. D. } Co-Editors.
E. F. DANIEL, M. D., }
GREENSVILLE DOWELL, M. D., *Publisher & Proprietor.*
Gaeveston, January 6, 1868.

I send with this number, bills to all the subscribers, according to the numbers of the Journal sent. Those who have returned them will all reply, as we are overlooking our books and wish to have our accounts correct.

THE

Galveston Medical Journal.

Vol. II. JANUARY, 1867. No. 1.

To Our Patrons.

We return our thanks for the kindness shown us last year and also to the many subscribers of the Journal. When we started into this enterprise we had counted up the cost and made our arrangements accordingly. We did not expect it would pay expenses for several years, but we are proud to say, if all pay up, we will have more than paid expenses. We have sent our Journal to every physician in the State whose name and post-office we could asscertain, and requested them to notify us if they did not wish to be continued as subscribers. Out of 700 only 8 have returned their numbers and requested us not to continue them as subscribers. We have sent a number to such post-offices as where we did not have any subscribers, requesting them to give it to their physician and send us a list of the physicians of their county. Many have responded to this request, and we have published a complete list in the December number of all the physicians whose names we have, and such as do not find their county and post-office represented in this list, will please send us their names and the names of all the physicians in their county. We intend to keep up a published list of all the physicians in the State whether they become subscribers or not, and occasionally may send them an extra number of our Journal. From the numerous letters we get we think we have done some good, and will at least continue our Journal another year, and we hope all our old subscribers will continued their subscription and get others for us.

We have not received that assistance we expected in contributions; but that does not discourage us; we have many good promises which, in due time, we doubt not, will be fulfilled. Our greatest difficulty has been in getting the work printed; we engaged the largest house in the place, and the most able, as we thought, but have been much behind our day of issue. We, personally, have done all in our power to remedy this, and in future the numbers will be published regularly; and if we cannot get it done promptly at one office we will at another, for we have paid for all published, and can and will pay for what we order. We have always had plenty of copy; but, by delays, some have been lost, others stolen out of our office, and our electrotypes, which we had been keeping to accompany articles, were also stolen. We have received several foreign journals from which we will make frequent translations. The one in the present number will be found new, and interesting. These journals now come regularly to us; and we will be able to give the latest and best articles. We have selected the ablest out of the four different languages—German, French, Spanish and Italian—and we will assure our readers that the articles come from the ablest minds in our profession.

We give also in this number the Laws, Rules and Regulations of U. S. in reference to the Metrical System of Weights and Measures, which we know to be the best and simplest in the whole world. It will become in its very nature universal, as it corresponds so near with our coin table, our people will readily adopt it. It is, as you now see, used in the Post-office Department, and is recommended to all the States. It is the French system (so-called), as it was adopted during the French revolution. In all our translations we will use it, and we publish the tables and laws from the Smithsonian Institute, so any one wishing to use any of the prescriptions or formularies can readily turn them into the troy weights and our liquid measure. This system is now being introduced in Prussia, and is rapidly gaining favor with the scientific world.

We will report at the end of each month the meteorology of Galveston, according to the system inaugurated at the Smithsonian Institute. We have all the improved instruments and have an accurate assistant who will take them down. We expect to use the centigrade thermometer as well as the metrical table, it being on just principles, and with rational zero and boiling point, and assumes the decimal scale—that is, by tens.

We return our sincere thanks to those who have contributed articles for the Journal, and especially to those who have sent us both cash for subscriptions and articles also.

We intend to make our Journal a good medium for advertisers of medical subjects, and will send out to the members of our profession some number salone for the benefit of our subscribers.

We have thus told you what we can and will do in our present volume, and we will know what satisfaction we have given in our past by the reception of this volume.

We advise all neighborhoods, towns and counties to form medical associations. They will find them of incalculable advantage; and we do hope that there will be formed a sufficient number of local societies to renew the State Society. We need organization, we need instruction; and, I am sorry to say, those who returned our Journal had great need of *one*, whether ours was suited to them [or not; and if so, we will order for them, or any of our subscribers, any journal on our exchange list, free of charge, when accompanied by the subscription price, as published in the present number.

We wish all a Happy New Year! and one of prosperity and personal happiness!

Galveston Medical College.

The present course of lectures are now being delivered to a class of thirty young men, and as fine and noble a set as is to be found in any college. There are about twenty second course students and applicants for graduation. We regretted the resignation of Prof. Watkins, but we believe his place is well filled by Prof. Grantt, and the chair of Physiology is now filled by the election of Dr. Francis Hollonquist, well known as a learned physician and legislator. Dr. R. H. Hanna is an excellent demonstrator, and very popular with the students. There are ample *subjects* and this branch is well attended too. The session closes the first Wednesday in April.

The Metric System of Weights and Measures,

WITH TABLES INTENDED ESPECIALLY FOR THE USE OF TEACHERS AND AUTHORS OF ARITHMETICS.

PREPARED BY PROF. H. A. NEWTON, OF YALE COLLEGE.

While this part of the appendix to the Annual Report of the Smithsonian Institution was passing through the press the following resolutions, pertaining to the French syetem of weights and measures, were adopted by both houses :

AN ACT to authorise the use of the metric system of weights and measures.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after the passage of this Act, it shall be lawful throughout the United States of America to employ the weights and measures of the metric system ; and no contract, or dealing, or pleading in any court, shall be deemed invalid, or liable to objection, because the weights or measures expressed or referred to therein are weights and measures of the metric system.

SEC. 2. *And be it further enacted*, That the tables in the schedule hereto annexed shall be recognized, in the construction of contracts, and in all legal proceedings, as establishing, in terms of the weights and measures now in use in the United States, the equivalents of the weights and measures expressed therein in terms of the metric system ; and said tables may be lawfully used for computing, determining, and expressing in customary weights and measures the weights and measures of the metric system.

AN ACT to enable the Secretary of the Treasury to furnish to each State one set of the standard weights and measures of the metric system.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury be, and he is hereby authorized and directed to furnish to each State, to be delivered to the Governor thereof, one set of the standard weights and measures of the metric system, for the use of the States respectively.

AN ACT to authorize the use in post-offices of weights of the denomination of grams.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Postmaster General be, and he is hereby, authorized and directed to furnish to the Post offices exchanging mails with foreign countries, and to such other offices as he shall think expedient, postal balances denominated in grams, of the metric system, and until otherwise provided by law, one-half ounce avoirdupois shall be deemed and taken for postal purposes as the equivalent of fifteen grams of the metric weights, and so adopted in progression ; and the rates of postage shall be applied accordingly.

The metric system is so called from the metre, which is its principal and only arbitrary unit. It is in use, to the exclusion of other weights and measures, in several countries of Europe, and is in partial use in almost all the nations of christendom.

UNITS OF THE SYSTEM.

The metre is a measure of length. It is intended to be, and is very nearly, one ten-millionth part of the distance from the equator to the pole, measured on the earth's surface. It is 39.37 inches, very nearly. Five metres are a little less than a rod.

The are is a measure of surface, and is equal to a square whose side is 10 metres. It contains 100 square metres, or a little less than four square rods.

The litre is the unit of dry measure, and also of liquid measure. It is equal to the volume of a cube whose edge is one-tenth of a metre. A cubic metre, therefore, contains 1,000 litres. The litre is a little more than a wine quart, being equal to about 1 one-eighteenth quart.

The gram is the unit of weight, and is the weight of a cube of water, each edge of the cube being one-hundredth of a metre. A litre of water weighs, therefore, 1,000 grams, and a cubic metre of water weighs 1,000,000 grams. A gram is 15,432 grains.

The stere is a cubic metre, and is about 1.308 cubic yards.

Each of these units is divided decimally, and also larger units are formed from multiplies by 10, 100, 1,000, &c. The successive multiplies are designated by the prefixes *deka*, *hecto*, *kilo* and *myria;* the successive parts by *deci*, *centi*, and *milli*.

The following schedules of equivalents of the several units of the system represent their values in denominations in use. The numbers are not carried to the highest degree of accuracy, but the amount of the error in them is generally (except in some of the smaller denominations) less than the change due to a difference of two or three degrees of temperature of the standard metre bar.

MEASURES OF LENGTH.

METRIC DENOMINATIONS AND VALUE.		EQUIVALENTS IN DENOMINATIONS IN USE.
Myriametre	10,000 metres	6.2137 miles.
Kilometre	1,000 metres	0.62137 mile, or 3,280 feet and 10 inches.
Hectometre	100 metres	328 feet and one inch.
Decametre	10 metres	393.7 inches.
Metre	1 metre	39.37 inches.
Decimetre	one-tenth of a metre	3.937 inches.
Centimetre	one-hundredth of a metre	0.3937 inch.
Millimetre	one-thousandth of a metre	0.0394 inch.

MEASURES OF SURFACE.

METRIC DENOMINATIONS AND VALUES.		EQUIVALENTS IN DENOMINATIONS IN USE.
Hectare	10,000 square metres	2.471 acres.
Are	100 square metres	119.6 square yards.
Centare	1 square metre	1,550 square inches.

MEASURES OF CAPACITY.

METRIC DENOMINATIONS AND VALUES.			EQUIVALENTS IN DENOMINATIONS IN USE.	
Names.	No. of litres.	Cubic Measure.	Dry measure.	Liquid or wine measure.
Kilolitre or stere	1000	1 cubic metre	1.308 cubic yard........	264.17 gallons.
Hectolitre.......	100	1-10 of a cubic metre...	2 bush. and 3.35 pecks..	26.417 gallons.
Decalitre........	10	10 cubic decimetres	9.08 quarts	2.6417 gallons.
Litre............	1	1 cubic decimetre	0.908 quart	1.0567 quart.
Decilitre	1-10	1-10 of a cubic decimetre	6.1022 cubic inches	0.845 gill.
Centilitre	1-100	10 cubic centimetres....	0.6102 cubic inch........	0.338 fluid ounce.
Millilitre........	1-1000	1 cubic centimetres.....	0.061 cubic inch.........	0.27 fluid drachm.

WEIGHTS.

METRIC DENOMINATIONS AND VALUES.			EQUIVALENTS IN DENOMINATIONS IN USE.
Names.	Number of gram.	Weight of what quantity of water at maximum density.	Avoirdupois weight.
Millier or tonneau..	1000000	1 cubic metre	2204.6 pounds.
Quintal	100000	1 hectolitre	220.46 pounds.
Myriagram.........	10000	10 litres....................	22.046 pounds.
Kilogram, or kilo...	1000	1 litre......................	2.2046 pounds.
Hectogram.........	100	1 decilitre..................	3.5274 ounces.
Decagram..........	10	10 cubic centimetres	0.3527 ounce.
Gram	1	1 cubic centimetre..........	15.432 grains.
Decigram	1-10	1-10 of a cubic centimetre..	0.5432 grain.
Centigram	1-100	10 cubic millimetres	0.1543 grain.
Milligram	1-1000	1 cubic millimetre..........	0.0154 grain.

For convenience in converting metric weights and measures into denominations in use, and *vice versa*, the following tables have been prepared. For the sake of uniformity in them, the metre is regarded as 39.37 inches, and the kilogram as 2.2046 avoirdupois pounds. The contents of the bushel and gallon are regarded, severally, as 2,150.42 and 231 cubic inches. The tables are computed from these several numbers and from the commonly recognized relations of weights and measures.

The use of the tables may be seen by a few examples:

Example 1—to find the number of miles in 74 kilometres: In Table 1, in the line for 70 and in the column under 4 we find 45.981, which is the number of miles required.

Example 2—to find the number of miles in 63,000 kilometres: In the same table, in the line for 60 and in the column under 3 is found 39.146. Removing the decimal point three places to the right for the three ciphers in 63,000, we have the answer—39,146 miles.

Example 3—to find the number of miles in 63,740 kilometres:

For 63,000 kilometres we have..................	39,146	miles.
For 740 kilometres we have..................	459.81	"
Hence for 63,740 kilometres we have..................	39,605.81	"

which is the number of miles required.

Example 4—to find the number of miles in 2,746 metres—that is, in 2.746 kilometres: In 27 kilometres by the table are 16.777 miles, and in 46 kilometres by the table are 28.583 miles. Hence, in

2.7 kilometres are 1.6777 miles,
and in .046 kilometres are .028583 "

and, therefore, in 2.746 kilometres are 1.706283 "

Or about 1.7063 miles, which is the number required.

SCHEME OF THE METRIC SYSTEM.

Ratios.	Lengths.	Surfaces.	Volumes.	Weights.
1000000	.. ..	.. ..	.. ..	Millier or Tonneau.
100000	.. ..	.. ..	.. ..	Quintal.
10000	Myriametre.	.. ..	Dekastere.	Myriagram.
1000	Kilometre.	.. ..	Kilolitra, or Stere.	Kilogram, 2.2046 pounds av.
100	Hectometre.	Hectare, (2.471 acres.)	Hectolitre.	Hectogram.
10	Decametre.	.. ..	Dekalitre.	Deckagram.
1	**Metre**, (39.37 inches.	**Are.**	**Litre.**	**Gram**, (15.4322 grains.)
1-10	Decimetre.	.. ..	Décilitre.	Decigram.
1-100	Centimetre.	Centare.	Centilitre.	Centigram.
	Millimetre.	.. ..	Millilitre.	Milligram.

The following scales exhibit the relative magnitude of the divisions of the metre and inches. The upper one represents a six-inch rule, divided to eighths, and the lower one represents 15 centimetres, or 150 millimetres. One inch is a little more than 25 (more exactly 25.4) millimetres.

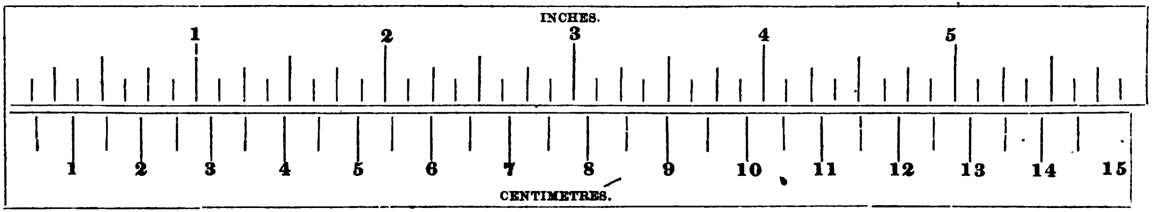

TABLE I.—FOR CONVERTING KILOMETRES INTO MILES.

Kilometres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	.621	1.243	1.864	2.485	3.107	3.728	4.350	4.971	5.592
10	6.214	6.835	7.456	8.078	8.699	9.321	9.942	10.563	11.185	11.806
20	12.427	13.049	13.670	14.292	14.913	15.534	16.156	16.777	17.398	18.020
30	18.641	19.263	19.884	20.505	21.127	21.748	22.369	22.991	23.612	24.233
40	24.855	25.476	26.098	26.719	27.340	27.962	28.583	29.204	29.826	30.447
50	31.068	31.690	32.311	32.933	33.554	34.175	34.797	35.418	36.039	36.661
60	37.282	37.904	38.525	39.146	39.768	40.389	41.010	41.632	42.253	42.875
70	43.496	44.117	44.739	45.360	45.981	46,603	47.224	47.845	48.467	49.088
80	49.710	50.331	50.952	51.574	52.195	52.816	53.438	54.059	54.681	55.302
90	55.923	56.545	57.166	57.787	58.409	59.030	59.652	60.273	60.894	61.516

TABLE II.—FOR CONVERTING MILES (OF 5,280 FEET) INTO METRES.

(To convert miles into kilometres use this table and divide the result by 1,000.)

Miles.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	00	1609	3219	4828	6437	8047	9656	11265	12875	14484
10	16093	17703	19312	20922	22531	24140	25750	27359	28968	30578
20	32187	33796	35406	37015	38624	40234	41843	43452	45062	46671
30	48280	49890	51499	53108	54718	56327	57936	59546	61155	62765
40	64374	65983	67593	69202	70811	72421	74030	75639	77249	78858
50	80467	82077	83686	85295	86905	88514	90123	91733	93342	94951
60	96561	98170	99780	101389	102998	104608	106217	107826	109436	111045
70	112654	114264	115873	117482	119092	120701	122310	123920	125529	127138
80	128748	130357	131966	133576	135185	136795	138404	140013	141623	143232
90	144841	146451	148060	149669	151279	152888	154497	156107	157716	159325

TABLE III.—FOR CONVERTING KILOMETRES INTO FEET.

(To convert metres into feet use this table and divide the result by 1,000.

Kilometres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	3281	6562	9842	13123	16404	19685	22966	26247	29527
10	32808	36089	39370	42651	45932	49212	52493	55774	59055	62336
20	65617	68897	72178	75459	78740	82021	85302	88582	91863	95144
30	98425	101706	104987	108267	111548	114829	118110	121391	124672	127952
40	131233	134514	137795	141076	144357	147637	150918	154199	157480	160761
50	164042	167322	170603	173884	177165	180446	183727	187007	190288	193567
60	196850	200131	203412	206692	209973	213254	216535	219816	223097	226377
70	229658	232939	236220	239501	242782	246062	249343	252624	255905	259186
80	262467	265747	269028	272309	275590	278871	282152	285432	288713	291994
90	295275	298556	301837	305117	308398	311679	314960	318241	321522	324802

TABLE IV.—FOR CONVERTING FEET INTO MILLIMETRES.

(Divide the result by 1,000 to obtain metres.)

Feet.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	305	610	914	1219	1524	1829	2134	2438	2743
10	3048	3353	3658	3962	4267	4572	4877	5182	5486	5791
20	6096	6401	6706	7010	7315	7620	7925	8230	8534	8839
30	9144	9449	9754	10058	10363	10668	10973	11278	11582	11887
40	12192	12497	12802	13106	13411	13716	14021	14326	14630	14935
50	15240	15545	15850	16154	16459	16764	17069	17374	17678	17983
60	18288	18593	18898	19202	19507	19812	20117	20422	20726	21031
70	21336	21641	21946	22250	22555	22860	23165	23470	23774	24079
80	24384	24689	24994	25298	25603	25908	26213	26518	26822	27127
90	27432	27737	28042	28346	28651	28956	29261	29566	29870	20175

TABLE V.—FOR CONVERTING METRES INTO FEET AND INCHES.

Metres.	0.		0.1.		0.2.		0.3.		0.4.		0.5.		0.6.		0.7.		0.8.		0.9.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In	Ft	In.
0	0	0	0	3.9	0	7.9	0	11.8	1	3.7	1	7.7	1	11.6	2	3.6	2	7.5	2	11.4
1	3	3.4	3	7.3	3	11.2	4	3.2	4	7.1	4	11.1	5	3.0	5	6.9	5	10.9	6	2.8
2	6	6.7	6	10.7	7	2.6	7	6.6	7	10.5	8	2.4	8	6.4	8	10.3	9	2.2	9	6.2
3	9	9.1	10	2.0	10	6.0	10	9.9	11	1.9	11	5.8	11	9.7	12	1.7	12	5.6	12	9.5
4	13	1.5	13	5.4	13	9.4	14	1.3	14	5.2	14	9.2	15	1.1	15	5.0	15	9.0	16	0.9
5	16	4.8	16	8.8	17	0.7	17	4.7	17	8.6	18	0.5	18	4.5	18	9.4	19	0.3	19	4.3
6	19	8.2	20	0.2	20	4.1	20	8.0	21	0.0	21	3.9	21	7.8	21	11.8	22	3.7	22	7.7
7	22	11.6	23	3.5	23	7.5	23	11.4	24	3.3	24	7.3	24	11.2	25	3.1	25	7.1	25	11.0
8	26	3.0	26	6.9	26	10.8	27	2.8	27	6.7	27	10.6	28	2.6	28	6.5	28	10.5	29	2.4
9	29	6.3	29	10.3	30	2.2	30	6.1	30	10.1	31	2.0	31	6.0	31	9.9	32	1.8	32	5.8

TABLE VI.—FOR CONVERTING INCHES AND FRACTIONS INTO MILLIMETRES.

Inches.	0	1/12	1/8	1/6	1/4	1/3	3/8	5/12	1/2	7/12	5/8	2/3	3/4	5/6	7/8	11/21
0	0	2.1	3.2	4.2	6.4	8.5	9.5	10.6	12.7	14.8	15.9	16.9	19.1	21.2	22.2	23.3
1	25.4	27.5	28.6	29.6	31.8	33.9	34.9	36.0	38.1	40.2	41.3	42.3	44.5	46.6	47.6	48.7
2	50.8	52.9	54.0	55.0	57.3	59.3	60.3	61.4	63.5	65.6	66.7	67.7	69.9	72.0	73.0	74.1
3	76.2	78.3	79.4	80.4	82.6	84.7	85.7	86.8	88.9	91.0	92.1	93.1	65.3	97.4	98.4	99.5
4	101.6	103.7	104.8	105.8	108.0	110.1	111.1	112.2	114.3	116.4	117.5	118.5	120.7	122.8	123.8	124.9
5	127.0	129.1	130.2	131.2	133.4	235.5	136.5	137.6	139.7	141.8	142.9	143.9	146.1	148.2	149.2	150.3
6	152.4	154.5	155.6	156.6	158.8	160.9	161.9	163.0	165.1	167.2	168.3	169.3	171.5	173.6	174.6	175.7
7	177.8	179.9	181.0	182.0	184.2	186.3	187.3	188.4	190.5	192.6	193.7	194.7	196.9	199.0	200.0	201.1
8	203.2	205.3	206.4	207.4	209.6	211.7	212.7	213.8	215.9	218.0	219.1	220.1	222.3	224.4	275.4	226.5
9	228.6	230.7	231.8	232.8	235.0	237.1	238.1	239.2	241.3	243.4	244.5	245.5	247.7	249.8	250.8	251.9
10	254.0	256.1	257.2	258.2	260.4	262.5	263.5	264.6	266.7	268.8	269.9	270.9	273.1	275.2	276.2	277.3
11	279.4	281.5	282.6	283.6	285.8	287.9	288.9	290.0	292.1	294.2	295.3	296.3	298.5	300.6	301.6	302.7

Table VII.—For converting Metres into Inches.

Metres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	39.4	78.7	118.1	157.5	196.8	236.2	275.6	315.0	354.3
10	393.7	433.1	472.4	511.8	551.2	590.6	629.9	669.3	708.7	748.0
20	787.4	826.8	866.1	905.5	944.9	984.2	1023.6	1063.0	1102.4	1141.7
30	1181.1	1220.5	1259.8	1299.2	1338.6	1377.9	1417.3	1456.7	1496.1	1535.4
40	1574.8	1614.2	1653.5	1692.9	1732.3	1771.6	1811.0	1850.4	1889.8	1929.1
50	1968.5	2007.9	2047.2	2086.5	2126.0	2165.3	2204.7	2244.1	2283.5	2322.8
60	2362.2	2401.6	2440.9	2480.3	2519.7	2559.0	2598.4	2637.8	2677.2	2716.5
70	2755.9	2795.3	2834.6	2874.0	2913.4	2952.7	2992.1	3031.5	3070.7	3110.2
80	3149.6	3189.0	3228.3	3267.7	3307.1	3346.4	3385.8	3425.2	3464.6	3503.9
90	3543.3	3582.7	3622.0	3661.4	3700.8	3740.1	3779.5	3818.9	3858.3	3897.6

Table VIII.—For converting Inches into Millimetres.

Inches.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	25.4	50.8	76.2	101.6	127.0	152.4	177.8	203.2	228.6
10	254.0	279.4	304.8	330.2	355.6	381.0	406.4	431.8	457.2	482.6
20	508.0	533.4	558.8	584.2	609.6	635.0	660.4	685.8	711.2	736.6
30	762.0	787.4	812.8	838.2	863.6	889.0	914.4	939.8	965.2	990.6
40	1016.0	1041.4	1066.8	1092.2	1117.6	1143.0	1168.4	1193.8	1219.2	1244.6
50	1270.0	1295.4	1320.8	1346.2	1371.6	1397.0	1422.4	1447.8	1473.2	1498.6
60	1524.0	1549.4	1574.8	1600.2	1625.6	1651.0	1676.4	1701.8	1727.2	1752.6
70	1778.0	1803.4	1828.8	1854.2	1879.6	1905.0	1930.4	1955.8	1981.2	2006.6
80	2032.0	2057.4	2082.8	2108.2	2133.6	2159.0	2184.4	2209.8	2235.2	2260.6
90	2286.0	2311.4	2336.8	2336.2	2387.6	2413.0	2438.4	2463.8	2489.2	2514.6

Table IX.—For converting Hectares into Acres.

Hectares.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	2.47	4.94	7.41	9.88	12.36	14.83	17.30	19.77	22.24
10	24.71	27.18	29.65	32.12	34.59	37.07	39.54	42.01	44.48	46.95
20	49.42	51.89	54.56	56.83	59.30	61.78	64.25	66.72	69.19	71.66
30	74.13	76.60	79.07	81.54	84.01	86.49	88.96	91.43	93.90	96.37
40	98.84	101.31	103.78	106.25	108.72	111.20	113.67	116.14	118.61	121.08
50	123.55	126.02	128.49	130.96	133.43	135.91	138.38	140.85	143.32	145.79
60	148.26	151.73	154.20	156.67	159.14	161.62	163.09	165.56	168.03	170.50
70	172.97	175.44	177.91	180.38	182.85	185.33	187.80	190.27	192.74	195.21
80	197.68	200.15	202.62	205.09	207.56	210.04	212.51	214.98	217.45	219.92
90	222.39	224.86	227.33	229.80	232.27	235.75	238.22	240.69	243.16	245.63

TABLE X.—FOR CONVERTING ACRES INTO HECTARES.

Acres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	.405	.809	1.214	1.619	2.023	2.428	2.833	3.238	3.642
10	4.047	4.452	4.856	5.261	5.666	6.070	6.475	6.880	7.284	7.689
20	8.094	8.499	8.903	9.308	9.713	10.117	10.522	10.927	11.331	11.736
30	12.141	12.546	12.950	13.355	13.760	14.164	14.569	14.974	15.378	15.783
40	16.188	16.592	16.997	17.402	17.807	18.211	18.616	19.021	19.425	19.830
50	20.235	20.639	21.044	21.449	21.854	22.258	22.663	23.068	23.472	23.877
60	24.282	24.686	25.091	25.496	25.900	26.305	26.710	27.115	27.519	27.924
70	28.329	28.783	29.138	29.543	29.947	30.352	30.757	31.161	31.566	31.971
80	32.376	32.780	33.185	33.590	33.994	35.393	35.804	36.208	36.713	37.018
90	36.423	36.827	37.232	37.637	38.041	38.446	38.851	39.256	39.660	40.065

TABLE XI.—FOR CONVERTING SQUARE KILOMETRES INTO SQUARE MILES.

Square kilometres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	0.386	0.772	1.158	1.544	1.931	2.317	2.703	3.089	3.475
10	3.861	4.247	4.633	5.019	5.405	5.792	6.178	6.564	6.950	7.336
20	7.722	8.108	8.494	8.880	9.266	9.653	10.039	10.425	10.811	11.197
30	11.583	11.969	12.355	12.741	13.127	13.514	13.900	14.286	14.672	15.058
40	15.444	15.830	16.216	16.602	16.988	17.375	17.761	18.147	18.533	18.919
50	19.305	19.691	20.077	20.463	20.849	21.236	21.622	22.008	22.394	22.780
60	23.166	23.552	23.938	24.324	24.710	25.097	25.483	25.869	26.255	26.641
70	27.027	27.413	27.799	28.185	28.571	28.958	29.344	29.730	30.116	30.502
80	30.888	31.274	31.660	32.046	32.432	32.819	33.205	33.591	33.977	34.363
90	34.749	35.135	35.521	35.907	36.293	36.680	37.056	37.452	37.838	38.224

TABLE XII.—FOR CONVERTING SQUARE MILES INTO HECTARES.

(To convert square miles into square kilometres use this table and divide the result by 100.)

Square miles.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	259	518	777	1036	1295	1554	1813	2072	2331
10	2590	2849	3108	3367	3626	3885	4144	4403	4662	4921
20	5180	5439	5698	5957	6216	6475	6734	6993	7252	7511
30	7770	8029	8288	8547	8806	9065	9324	9583	9842	10101
40	10360	10619	10878	11137	11396	11655	11914	12173	12432	12691
50	12950	13209	13468	13727	13986	14245	14504	14763	15022	15281
60	15540	15799	16058	16317	16576	16835	17094	17353	17612	17871
70	18130	18389	18648	18907	19166	19425	19684	19943	20202	20461
80	20720	20979	21238	21497	21756	22015	22274	22533	22792	23051
90	23310	23569	23828	24087	24346	24605	24864	25123	25382	25641

TABLE XIII.—FOR CONVERTING CENTARES OR SQUARE METRES INTO SQUARE YARDS.

Centares.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	1.196	2.392	3.588	4.784	5.980	7.176	8.372	9.568	10.764
10	11.960	13.156	17.352	15.548	16.744	17.940	19.136	20.332	21.528	22.724
20	23.920	25.116	26.312	27.508	28.704	29.900	31.096	32.292	33.488	34.684
30	35.880	37.076	38.272	39.468	40.663	41.859	43.055	44.251	45.447	46.643
40	47.839	49.035	50.231	51.427	52.623	53.819	55.015	56.211	57.407	58.603
50	59.799	60.995	62.191	63.387	64.583	65.779	66.975	68.171	69.367	70.563
60	71.759	72.955	74.151	75.347	76.543	77.739	78.935	80.131	81.327	82.523
70	83.719	84.915	86.111	77.307	88.503	89.699	90.895	92.091	93.287	94.483
80	95.679	96.875	98.071	99.267	100.463	101.659	102.855	104.051	105.247	106.443
90	107.639	108.835	110.031	111.227	112.423	113.619	114.815	116.011	117.207	118.403

TABLE XIV.—FOR CONVERTING SQUARE YARDS INTO CENTARES OR SQUARE METRES.

Square yards.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	0.836	1.672	2.508	3.345	4.181	5.017	5.853	6.689	7.525
10	8.361	9.197	10.034	10.870	11.706	12 542	13.378	14.214	15.050	15.886
20	16.723	17.559	18.395	19.231	20.067	20.903	21.739	22.576	23.412	24.248
30	25.084	25.920	26.756	27.592	28.428	29.265	30.101	30.937	31.773	32.609
40	33.445	34.281	35.117	35.954	36.790	37.626	38.462	39.298	40.134	40.970
50	41.807	42.643	43.479	44.315	45.151	45.987	46.823	47.659	48.496	49.332
60	50.168	51.004	51.840	52.676	53.512	54.348	55.185	56.021	56.857	57.693
70	58.529	59.365	60.201	61.038	61.874	62.710	63.546	64.382	65.218	66.054
80	66.890	67.727	68.563	69.399	70.235	71.071	71.907	72.743	73.580	74.416
90	75.252	76.088	76.924	77.760	78.596	79.432	80.269	81.105	81.941	82.777

TABLE XV.—FOR CONVERTING SQUARE METRES OR CENTARES INTO SQUARE FEET.

Square metres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	10.76	21.53	32.29	43.06	53.82	64.58	75.35	86.11	96.87
10	107.64	118.40	129.17	139.93	150.69	161.46	172.22	182.99	193.75	204.51
20	215.28	226.04	236.81	247.57	258.33	269.10	279.86	290.62	301.39	312.15
30	322.92	333.68	344.44	355.21	365.97	376.74	387.50	398.26	409.03	419.79
40	430.55	441.32	452.08	462.85	473.61	484.37	495.14	505.90	516.67	527.43
50	538.19	548.96	559.72	570.48	581.25	592.01	602.78	613.54	624.30	635.07
60	645.83	656.60	667.36	678.12	688.89	699.65	710.42	721.18	731.94	742.71
70	753.47	764.23	775.00	785.76	796.53	807.29	818.05	828.82	839.58	850.35
80	861.11	871.87	882.64	893.40	904.16	914.93	925.69	936.45	947.22	957.98
90	968.75	979.51	990.28	1001.04	1011.80	022.57	1033.33	1044.10	1054.86	1065.62

TABLE XVI.—FOR CONVERTING SQUARE FEET INTO SQUARE DECIMETRES.

(Divide the result by 100 to obtain square metres.)

Square feet.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	9.29	18.58	27.87	37.16	46.45	55.74	65.03	74.32	83.61
10	92.90	102.19	111.48	120.77	130.06	139.36	148.65	157.94	167.23	176.52
20	185.81	195.10	204.39	213.68	222.97	232.26	241.55	250.84	260.13	269.42
30	278.71	288.00	297.29	306.58	315.87	325.16	334.45	343.74	353.03	362.32
40	371.61	380.90	390.19	399.48	408.78	418.07	427.36	436.65	445.94	455.23
50	464.52	473.81	483.10	492.39	501.68	510.97	520.26	529.55	538.84	548.13
60	557.48	566.71	576.00	585.29	594.58	603.87	613.16	622.45	631.74	641.0
70	650.32	659.61	668.90	678.19	687.49	696.78	706.07	715.36	724.65	733.9
80	743.28	752.52	761.81	771.10	780.39	789.68	798.97	808.26	817.55	826.84
90	836.13	845.42	854.71	864.00	873.29	882.58	891.87	901.16	910.45	919.74

TABLE XVII.—FOR CONVERTING SQUARE MÈTRES OR CENTARES INTO SQUARE INCHES.

Square metres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	1550	3100	4650	6200	7755	9300	10850	12400	13950
10	15500	17050	18600	20150	21700	23250	24800	26350	27900	29450
20	31000	32550	34100	35650	37200	38750	40300	41850	43400	44950
30	46500	48050	49600	51150	52700	54250	55800	57350	58900	60450
40	62000	63550	65100	66650	68200	69750	71300	72850	74400	75950
50	77500	79050	80600	82150	83700	85250	86800	88350	89900	91450
60	93000	94550	96100	97650	99200	100750	103300	103850	105400	106950
70	108500	110050	111600	113150	114700	116250	117800	119350	120900	122450
80	124000	125550	127100	128650	130200	131750	133300	134850	136400	137950
90	139500	141050	142600	144150	145700	147250	148800	150350	151900	153450

TABLE XVIII.—FOR CONVERTING SQUARE INCHES INTO SQUARE CENTIMETRES.

(Divide the number of square centimetres by 10,000 to obtain square metres.)

Square inches.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	6.45	12.90	19.35	25.81	32.26	38.71	45.16	51.61	58.06
10	64.52	70.97	77.42	83.87	90.32	96.77	103.23	109.[illegible]8	116.13	122.58
20	129.03	135.48	141.94	148.39	154.84	161.29	167.74	174.19	180.65	187.10
30	103.55	200.00	206.45	212.90	219.36	225.81	232.26	238.71	245.16	251.61
40	258.07	264.52	207.97	277.42	283.87	290.32	296.77	303.23	309.68	316.13
50	322.58	329.03	335.48	341.94	348.39	354.84	361.29	367.74	374.19	380.65
60	387.10	393.55	400.00	406.45	412.90	419.36	425.81	432.26	438.71	445.16
70	451.61	358.07	464.52	470.97	477.42	483.87	490.32	496.78	503.23	509.68
80	516.13	522.52	529.03	535.48	541.94	548.39	554.84	561.29	567.74	574.19
90	580.65	587.10	593.55	600.00	606.45	612.90	619.36	625.81	632.26	638.71

TABLE XIX.—FOR CONVERTING CUBIC METRES OR STERES INTO CUBIC YARDS.

Cubic metres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	1.308	2.616	3.924	5.232	6.540	7.848	9.156	10.464	11.771
10	13.079	14.387	15.695	17.003	18.311	19.619	20.927	22.235	23.543	24.851
20	26.159	27.467	28.775	30.083	31.391	32.699	34.007	35.314	36.622	37.930
30	39.238	40.546	41.854	43.162	44.470	45.778	47.086	48.394	49.702	51.010
40	52.318	53.626	54.934	56.242	57.549	58.857	60.165	61.473	62.781	64.089
50	65.397	66.705	68.013	69.321	70.629	71.937	73.245	74.553	75.861	77.169
60	78.477	79.785	81.092	82.400	83.708	85.016	86.324	87.632	88.940	90.248
70	91.556	92.864	94.172	95.480	96.788	98.096	99.404	100.712	102.020	103.327
80	104.635	105.943	107.251	108.559	109.867	111.175	112.48	113.791	115.099	116.407
90	117.715	119.023	120.331	121.639	122.947	124.255	125.563	126.870	128.178	129.486

TABLE XX.—FOR CONVERTING CUBIC YARDS INTO LITRES.

(To convert cubic yards into steres or cubic metres use this table and divide the result by 1,000.)

Cubic yards.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	765	1529	2294	3058	3823	4587	5352	6116	6881
10	7646	8410	9175	9939	10704	11468	12233	12998	13762	14527
20	15291	16056	16820	17585	18349	19114	19879	20643	21408	22172
30	22937	23701	24466	25230	25995	26760	27524	28289	29053	29818
40	30582	31347	32111	32876	33641	34405	35170	35934	36699	37463
50	38228	38993	39757	40522	41286	42051	42815	43580	44344	45109
60	45874	46638	47403	48167	48932	49696	50461	51225	51990	52755
70	53519	54284	55048	55813	56577	57342	58107	58871	59636	60400
80	61165	61929	62694	63458	64223	64988	65752	66517	67281	68046
90	68810	69575	70339	71104	71869	72633	73398	74162	74927	75691

TABLE XXI.—FOR CONVERTING CUBIC FEET INTO LITRES OR CUBIC DECIMETRES.

(Divide the number of litres by 1.000 for cubic metres.)

Cubic feet.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	28.3	56.6	85.0	113.3	141.6	169.9	198.2	226.5	254.9
10	283.2	311.5	339.8	368.1	396.4	424.8	453.1	481.4	509.7	538.0
20	566.3	594.7	623.0	651.3	679.6	207.9	736.2	764.6	792.9	821.2
30	849.5	877.8	906.1	934.5	962.8	991.3	1019.4	1047.7	1076.0	1104.4
40	1132.7	1161.0	1189.3	1217.6	1245.9	1274.3	1302.6	1330.9	1359.2	1387.5
50	1415.9	1444.2	1472.5	1300.8	1529.1	1557.4	1585.8	1614.1	1642.4	1670.7
60	1699.0	1727.3	1755.7	1784.0	1812.3	1840.6	1868.9	1897.2	1925.6	1953.9
70	1982.2	2010.5	2038.8	2067.1	2095.5	2123.8	2152.1	2180.4	2208.7	2237.0
80	2265.4	2293.7	2322.0	2350.3	2378.6	2406.9	1485.3	1463.6	2491.9	2520.2
90	2548.5	2576.8	2605.2	2633.5	2661.8	2690.1	2718.4	2746.7	2775.1	2803.4

TABLE XXII.—FOR CONVERTING CUBIC METRES INTO CUBIC FEET.

(To convert litres into cubic feet use this table and divide by 1,000.)

Cubic metres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	35.3	70.6	105.9	141.3	176.6	211.9	247.2	282.5	317.8
10	353.1	388.5	423.8	459.1	494.4	529.7	565.0	600.3	635.7	671.0
20	706.3	741.6	776 9	812.2	847.5	882.9	918.2	953.5	988.8	1024.1
30	1059.4	1094.7	1130.1	1165.4	1200.7	1236.0	1271.3	1306.6	1341.9	1377.3
40	1412.6	1447.9	1483.2	1518.5	1553.8	1589.2	1624.5	1659.8	1695.1	1730.4
50	1765.7	1801.0	1836.4	1871.7	1907.0	1942.3	1977.6	2012.9	2048.2	2083.6
60	2118.9	2154.2	2189.5	2224.8	2260.1	2295.4	2330.8	2366.1	2401.4	2436.7
70	2472.0	2507.3	2542.6	2578.0	2613.3	2648.6	2683.9	2719.2	2754.5	2789.8
80	2825.2	2860.5	2895.8	2931.1	2966.4	3001.7	3037.0	3072.4	3107.7	3143.0
90	3178.3	3213.6	3248.9	3284.2	3319.6	3354.9	3390.2	3425.5	3460.8	3496.1

TABLE XXIII.—FOR CONVERTING LITRES INTO CUBIC INCHES.

Litres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	61.0	122.0	183.1	244.1	305.1	366.1	427.2	488.2	549.2
10	610.2	671.3	732.3	793.3	854.3	915.4	976.4	1037.4	1098.4	1159.4
20	1220.5	1281.5	1342.5	1403.5	1464.6	1525.6	1586.6	1647.6	1708.7	1769.7
30	1830.7	1891.7	1952.8	2013.8	2074.8	2135.8	2196.8	2257.9	2318.9	2379.9
40	2440.9	2502.0	2563.0	2624.0	2685.0	2746.1	2807.1	2868.1	2929.1	2990.1
50	3051.2	3112.2	3173.2	3234.2	3295.3	3356.3	3417.3	3478.3	3539.4	3600.4
60	3661.4	3722.4	3783.5	3844.5	3905.5	3966.5	4027.5	4088.6	4149.6	4210.6
70	4271.6	4332.7	4393.7	4454.7	4515.7	4576.8	4637.8	4698.8	4759.8	4820.8
80	4881.9	4942.9	5003.9	5064.9	5126 0	5187.0	5248.0	5309.0	5370.1	5431.1
90	5492.1	5553.1	5614.2	5675.2	5736.2	5797.2	5858.2	5919.3	5980.3	6041.3

TABLE XXIV.—FOR CONVERTING CUBIC INCHES INTO CUBIC CENTIMETRES.

(To convert cubic inches into litres use this table and divide the result by 1,000.)

Cubic inches.	0	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	16.4	32.8	49.2	65.5	81.9	98.3	114.7	131.1	147.5
10	163.9	180.3	196.6	213.0	229.4	245.8	262.2	278.6	295.0	311.4
20	227.7	344.1	360.5	376.8	393.3	409.7	426.1	442.5	458.8	475.2
30	491.6	508.0	524.4	540.9	557.2	573.6	589.9	606.3	622.7	639.1
40	655.5	671.9	688.3	704.6	721.0	737.4	753.8	770.2	786.6	703.0
50	819.4	835.7	852.1	868.5	884.9	901.3	917.7	934.1	950.5	966.8
60	983.2	990.6	1016.0	1032.4	1048.8	1065.2	1081.6	1097.9	1114.3	1130.7
70	1147.1	1163.5	1179.9	1196.3	1212.6	1229.0	1245.4	1261.8	1278.2	1294.6
80	1311.0	1327.4	1343.7	1350.1	1376.5	1392.9	1409.3	1425.7	1442.1	1458.5
90	1474.2	1491.2	1507.6	1524.0	1530.4	1556.8	1573.2	1589.6	1605.9	1622.3

TABLE XXV.—FOR CONVERTING HECTOLITRES INTO BUSHELS.

(To convert cubic metres to bushels use this table and multiply the result by 10.)

Hectolitres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	2.84	5.68	8.51	11.35	14.19	17.03	19.86	22.70	25.54
10	28.38	31.22	34.05	36.89	39.73	42.57	45.40	48.24	51.08	53.92
20	56.75	59.59	62.43	65.27	68.11	70.94	73.78	76.62	79.46	82.29
30	85.13	87.97	90.81	93.65	96.48	99.32	102.16	105.00	107.83	110.67
40	113.51	116.35	119.19	121.02	124.86	127.70	130.54	133.37	136.21	139.05
50	141.89	144.72	147.56	150.40	153.24	156.08	158.91	161.75	164.59	167.43
60	170.26	173.10	175.94	178.78	181.62	184.45	187.29	190.13	192.97	195.80
70	198.64	201.48	204.32	207.16	209.99	212.83	215.67	218.51	221.34	224.18
80	227.02	229.86	232.69	235.53	238.37	241.21	244.05	246.88	249.72	252.56
90	255.40	258.23	261.07	263.91	266.75	269.59	272.42	275.26	278.10	280.94

TABLE XXVI.—FOR CONVERTING BUSHELS INTO LITRES.

Bushels	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	35.2	70.5	105.7	141.0	176.2	211.4	246.7	281.9	317.2
10	352.4	387.6	422.9	458.1	493.3	528.6	563.8	599.2	634.3	669.5
20	704.8	740.0	775.3	810.5	845.7	881.0	916.2	951.5	986.7	1021.9
30	1057.2	1092.4	1127.7	1162.9	1198.1	1233.4	1268.6	1303.9	1339.1	1374.3
40	1409.6	1444.8	1480.0	1515.3	1550.5	1585.8	1621.0	1656.2	1691.5	1726.7
50	1762.0	1797.2	1832.4	1867.7	1902.9	1938.2	1973.3	2008.6	2043.9	2079.1
60	2114.4	2149.6	2184.8	2220.1	2255.3	2290.6	2325.8	2361.0	2396.3	2431.5
70	2466.7	2502.0	2537.2	2572.5	2607.7	2642.9	2678.2	2713.4	2748.7	2783.9
80	2819.1	2854.4	2889.6	2924.9	2960.0	2995.3	3030.6	3065.8	3101.1	3136.3
90	3171.5	3206.8	3242.0	3277.3	3312.5	3317.7	3383.0	3418.2	3453.4	3488.7

TABLE XXVII.—FOR CONVERTING HECTOLITRES INTO WINE GALLONS.

Hectolitres.	0	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	26.42	52.83	79.25	105.67	132.09	158.50	184.92	211.34	237.75
10	264.17	290.59	317.00	343.42	369.84	396.26	422.67	449.09	475.51	501.92
20	528.34	554.76	581.18	607.59	634.01	660.43	686.84	713.26	739.68	766.09
30	792.51	818.93	845.35	871.76	898.18	924.60	951.01	977.43	1003.85	1030.26
40	1056.68	1083.10	1109.52	1185.93	1162.35	1188.77	1215.18	1241.60	1268.02	1294.44
50	1320.85	1347.27	1373.69	1400.10	1426.52	1452.94	1479.35	1505.77	1532.09	1558.61
60	1585.02	1611.44	1637.86	1664.27	1690.69	1717.11	1743.53	1769.94	1796.36	1822.78
70	1849.19	1875.61	1902.03	1928.44	1954.86	1981.28	2007.70	2034.11	2060.53	2086.95
80	2113.36	2139.78	2166.10	2192.61	2219.03	2245.45	2271.87	2298.28	2324.70	2351.12
90	2377.53	2403.95	2430.37	2456.79	2483.10	2509.62	2536.04	2592.45	2618.87	2645.29

Table XXVIII.—For converting Wine Gallons into Litres.

Wine gallons.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	3.79	7.57	11.36	15.14	18.93	22.71	26.50	30.28	34.07
10	37.85	40.64	45.43	49.21	53.00	56.78	60.57	64.35	68.14	71.92
20	75.71	79.49	83.28	87.06	90.85	94.64	98.42	102.21	105.99	109.78
30	113.56	117.35	121.13	124.92	128.70	132.49	136.28	140.06	143.85	147.63
40	151.42	155.20	158.99	162.77	166.56	170.34	174.13	177.92	181.70	185.49
50	189.27	193.06	197.84	200.63	204.41	208.20	211.98	215.77	219.56	223.34
60	227.13	230.91	234.70	238.48	242.27	246.05	249.84	253.62	257.41	261.19
70	264.98	268.77	272.55	276.34	280.12	283.91	287.69	291.48	295.26	299.05
80	302.83	306.62	310.41	314.19	317.98	321.76	325.55	329.33	333.12	336.90
90	340.69	344.47	348.26	352.05	355.83	359.62	363.40	367.19	370.97	374.76

Table XXIX.—For converting Wine Quarts into Millilitres.

(To convert quarts into litres use this table and divide the result by 1,000.)

Wine quarts.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	946	1893	2839	3785	4732	5678	6625	7571	8517
10	9464	10410	11356	12303	13249	14195	15142	16088	17034	17981
20	18927	19874	20820	21766	22713	23659	24605	25552	26498	27444
30	28391	29337	30283	31230	32176	33123	34069	35015	35962	36908
40	37854	38801	39747	40693	41640	42586	43532	44479	45425	46372
50	47318	48264	49211	50157	51103	52050	52996	53942	54889	55835
60	56782	57728	58674	59621	60567	61513	62460	63406	64352	65299
70	66245	67191	68138	69084	70031	70977	71923	72870	73816	74762
80	75709	76655	77601	78548	79494	80440	81387	82333	83280	84226
90	85172	86119	87065	88011	88958	89904	90850	91797	92743	93690

Table XXX.—For converting Hectolitres into Wine Quarts.

(To convert litres into quarts use this table and divide the result by 100.)

Hectolitres.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	105,7	211.3	317.0	422.7	528.3	634.0	739.7	845.3	951.0
10	1056.7	1162.3	1268.0	1373.7	1479.4	1585.0	1690.7	1796.4	1902.0	2007.7
20	2113.4	2219.0	2324.7	2430.4	2536.0	2641.7	2747.4	2853.0	2958.7	3064.4
30	3170.0	3275.7	3381.4	3487.1	3592.7	3698.4	3804.1	3909.7	4015.4	4121.1
40	4226.7	4332.4	4438.1	4543.7	4649.4	4755.1	4860.7	4966.4	5072.1	5177.7
50	5283.4	5389.1	5494.7	5600.4	5706.1	5811.8	5917.4	6023.1	6128.8	6234.4
60	6340.1	6445.8	6551.4	6657.1	6762.8	6868.4	6974.1	7079.8	7185.4	7291.1
70	7396.8	7502.4	7608.1	7713.8	7819.4	7925.1	8030.8	8136.5	8242.1	8347.8
80	8453.5	8559.1	8664.8	8770.5	8876.1	8981.8	9087.5	9193.1	9298.8	9404.5
90	9510.1	9615.8	9721.5	9827.1	9932.8	10038.5	10144.1	10249.8	10355.5	10461.2

TABLE XXXI.—FOR CONVERTING LITRES INTO FLUID OUNCES.

Litres	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	33.8	67.6	101.4	135.3	169.1	202.9	236.7	270.5	304.3
10	338.1	372.0	405.8	439.6	473.4	507.2	541.0	574.8	608.6	642.5
20	676.3	710.1	743.9	777.7	811.5	845.3	879.2	913.0	946.8	980.6
30	1014.4	1048.2	1082.0	1115.9	1149.7	1183.5	1217.3	1251.1	1284.9	1318.7
40	1352.6	1386.4	1420.2	1454.0	1487.8	1521.6	1555.4	1589.2	1623.1	1656.9
50	1690.7	1724.5	1758.3	1792.1	1825.9	1859.8	1893.6	1927.4	1961.2	1995.0
60	2028.8	2062.6	2096.5	2130.3	2164.1	2197.9	2231.7	2265.5	2299.3	2333.2
70	2367.0	2400.8	2434.6	2468.4	2502.2	2536.0	2569.8	2603.7	2637.5	2671.3
80	2705.1	2738.9	2772.7	2806.5	2840.4	2874.2	2908.0	2941.8	2975.6	3009.4
90	3043.2	3077.1	3110.9	3144.7	3178.5	3212.3	3246.1	3279.9	3313.8	3347.6

TABLE XXXII.—FOR CONVERTING FLUID OUNCES INTO CENTILITRES.

Fluid ounces.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	2.96	5.91	8.87	11.83	14.79	17.74	20.70	23.66	26.62
10	29.57	32.53	35.49	38.45	41.40	44.36	47.32	50.28	53.23	56.19
20	59.15	62.10	65.06	68.02	70.98	73.93	76.89	79.85	82.81	85.76
30	88.72	91.68	94.64	97.59	100.55	103.51	106.47	109.42	112.38	115.34
40	118.29	121.25	124.21	127.17	130.12	133.08	136.04	139.00	141.95	144.91
50	147.87	150.83	153.78	156.74	159.70	162.66	165.61	168.57	171.53	174.48
60	177.44	180.40	183.36	186.31	189.27	192.23	195.19	198.14	201.10	204.06
70	207.02	209.97	212.93	215.89	218.85	221.80	224.76	227.72	230.67	233.63
80	236.59	239.55	242.50	245.46	248.42	251.37	254.33	257.29	260.25	263.21
90	266.16	269.12	272.08	275.04	277.99	280.95	283.91	286.86	289.82	292.78

TABLE XXXIII.—FOR CONVERTING TONNEAUX OR MILLIERS INTO LONG TONS, (OF 2,240 POUNDS.)

(To convert kilograms into long tons use this table and divide the result by 1,000.)

Tonneaux or milliers.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	0.984	1.968	2.953	3.937	4.921	5.905	6.889	7.874	8.858
10	9.842	10.826	11.810	12.795	13.779	14.763	15.747	16.731	17.716	18.700
20	19.684	20.668	21.652	22.637	23.621	24.605	25.589	26.573	27.557	28.542
30	29.526	30.510	31.494	32.478	33.463	34.447	35.431	36.415	37.399	38.384
40	39.368	40.352	41.336	42.320	43.305	44.289	45.273	46.257	47.241	48.226
50	49.210	50.194	51.178	52.162	53.147	54.131	55.115	56.099	57.083	58.068
60	59.052	60.036	61.020	62.004	62.989	63.973	64.957	65.941	66.925	67.910
70	68.894	69.878	70.862	71.846	72.831	73.815	74.799	75.783	76.767	77.752
80	78.736	79.720	80.704	81.688	82.672	83.657	84.641	85.625	86.609	87.593
90	88.578	89.562	90.546	91.530	92.514	93.499	94.483	95.467	96.451	97.435

TABLE XXXIV.—FOR CONVERTING LONG TONS (OF 2,240 LBS. EACH) INTO KILOGRAMS.

(Divide the result by 1,000 for tonneaux or milliers.

Long tons.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	1016	2032	3048	4064	5080	6096	7112	8128	9145
10	10161	11177	12193	13209	14225	15241	16257	17273	18289	19305
20	20321	21337	22353	23369	24385	25401	26417	27434	28450	29466
30	30482	31498	32514	33530	34546	35562	36578	37594	38610	39626
40	40642	41658	42674	43690	44707	45723	46739	47755	48771	49787
50	50803	51819	52835	53851	54867	55883	56899	57915	58931	59947
60	60963	61979	62996	64012	65028	66044	67060	68076	69092	70108
70	71124	72140	73156	74172	75188	76204	77220	78236	79252	80269
80	81285	82301	83317	84333	85349	86365	87381	88397	89413	90429
90	91445	92461	93477	94493	95509	96525	97542	98558	99574	100590

TABLE XXXV.—FOR CONVERTING TONNEAUX OR MILLIERS INTO SHORT TONS, (OF 2,000 POUNDS.

(To convert kilograms into short tons use this table and divide the result by 1,000.)

Tonneaux or milliers.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	1.102	2.205	3.307	4.409	5.512	6.614	7.716	8.818	9.921
10	11.023	12.125	13.228	14.330	15.432	16.535	17.637	18.739	19.841	20.944
20	22.046	23.148	24.251	25.353	26.455	27.558	28.660	29.762	30.864	31.967
30	33.069	34.171	35.274	36.376	37.478	38.581	39.683	40.785	41.887	42.990
40	44.092	45.194	46.297	47.399	48.501	49.604	50.708	51.808	52.910	54.013
50	55.115	56.217	57.320	58.422	59.524	60.627	61.729	62.831	63.933	65.036
60	66.138	67.240	68.343	69.445	70.547	71.650	72.752	73.854	74.956	76.059
70	77.161	78.263	79.366	80.468	81.570	82.673	83.775	84.877	85.979	87.082
80	88.184	89 286	90.389	91.491	92.593	93.696	94.798	95.900	97.002	98.105
90	99.207	100.309	101.412	102.514	103.616	104.719	105.821	106.923	108.025	109.128

TABLE XXXVI.—FOR CONVERTING SHORT TONS (OF 2,000 LBS. EACH) INTO KILOGRAMS.

(Divide the result by 1,000 for tonneaux or milliers.)

Short tons.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	907	1814	2722	3629	4536	5443	6350	7258	8165
10	9072	9979	10886	11794	12701	13608	14515	15422	16329	17237
20	18144	19051	19958	20865	21773	22680	23587	24494	25401	26309
30	27216	28123	29030	29937	30845	31752	32659	33566	34473	35381
40	36288	37195	38102	39009	39917	40824	41731	42638	43545	44453
50	45360	46267	47174	48081	48988	49896	50803	51710	52617	53524
60	54432	55339	56246	57153	58060	58968	59875	60782	61689	62596
70	63504	64411	65318	66225	67132	68040	68947	69854	70761	71668
80	72576	73483	74390	75297	76204	77111	78019	78926	79833	80740
90	81647	82555	83462	84369	85276	86183	87091	87998	88905	89812

TABLE XXXVII.—FOR CONVERTING KILOGRAMS INTO AVOIRDUPOIS POUNDS.

Kilograms.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	2.205	4.409	6.614	8.818	11.023	13.228	15.432	17.637	19.841
10	22.046	24.251	26.455	28.660	30.864	33.069	35.274	37.478	39.683	41.887
20	44.092	46.297	48.501	50.706	52.910	55.115	57.320	59.524	61.729	63.933
30	66.138	68.343	70.547	72.752	74.956	77.161	79.366	81.570	83.775	85.979
40	88.184	90.389	92.593	94.798	97.002	99.207	101.412	103.616	105.821	107.025
50	110.230	112.435	114.639	116.844	119.048	121.253	123.458	125.662	127.867	130.071
60	132.276	134.481	136.685	138.890	141.094	143.299	145.504	147.708	149.913	152.117
70	154.322	156.527	158.731	160.936	163.140	165.345	167.550	169.754	171.959	174.163
80	176.368	178.573	180.777	182.982	185.186	187.391	189.596	191.800	194.005	196.209
90	198.414	200.619	202.823	205.028	207.232	209.437	211.642	213.846	216.051	218.255

TABLE XXXVIII.—FOR CONVERTING AVOIRDUPOIS POUNDS INTO GRAMS.

Pounds.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	454	907	1361	1814	2268	2722	3175	3629	4082
10	4536	4990	5443	5897	6350	6804	7258	7711	8165	8618
20	9072	9526	9979	10433	10886	11340	11794	12247	12701	13154
30	13608	14062	14515	14969	15422	15876	16329	16783	17237	17690
40	18144	18597	19051	19505	19958	20410	20865	21319	21773	22226
50	22680	23133	23587	24041	24494	24948	25401	25855	26309	26762
60	27216	27669	28123	28577	29030	29484	29937	30391	30845	31298
70	31752	32205	32659	33113	33566	34020	34473	34927	35381	35834
80	36288	36741	37195	37649	38102	38556	39009	39463	39917	40370
90	40824	41277	41731	42185	42638	43092	43545	43999	44453	44906

TABLE XXXIX.—FOR CONVERTING KILOGRAMS INTO AVOIRDUPOIS POUNDS AND OUNCES.

Kilograms.	0.		0.1.		0.2.		0.3.		0.4.		0.5.		0.6.		0.7.		0.8.		0.9.	
	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.
0	0	0.0	0	3.5	0	7.1	0	10.6	0	14.1	1	1.6	1	5.2	1	8.7	1	12.2	1	15.7
1	2	3.3	2	6.8	2	10.3	2	13.9	3	1.4	3	4.9	3	8.4	3	12.0	3	15.5	4	3.0
2	4	6.5	4	10.1	4	13.6	5	1.1	5	4.7	5	8.2	5	11.7	5	15.2	6	2.8	6	6.3
3	6	9.8	6	13.3	7	0.9	7	4.4	7	7.9	7	11.5	7	15.0	8	2.5	8	6.0	8	9.6
4	8	13.1	9	0.6	9	4.1	9	7.7	9	11.2	9	14.7	10	2.3	10	5.8	10	9.3	10	12.8
5	11	0.4	11	3.9	11	7.4	11	11.0	11	14.5	12	2.0	12	5.5	12	9.1	12	12.6	13	0.1
6	13	3.6	13	7.2	13	10.7	13	14.2	14	1.8	14	5.3	14	8.8	14	12.3	14	15.9	15	3.4
7	15	6.9	15	10.4	15	14.0	16	1.5	16	5.0	16	8.6	16	12.1	16	15.6	17	3.1	17	6.7
8	17	10.2	17	13.7	18	1.3	18	4.8	18	8.3	18	11.8	18	15.4	19	2.9	19	6.4	19	9.9
9	19	13.5	20	1.0	20	4.5	20	8.0	20	11.6	20	15.1	21	2.6	21	6.2	21	9.7	21	13.2
10	22	0.7	22	4.3	22	7.8	22	11.3	22	14.8	23	2.4	23	5.9	23	9.4	23	13.0	24	0.5
11	24	4.0	24	7.5	24	11.1	24	14.6	25	2.1	25	5.6	25	9.2	25	12.7	26	0.2	26	3.8
12	26	7.3	26	10.8	26	14.3	27	1.9	27	5.4	27	8.9	27	12.4	28	0.0	28	3.5	28	7.0
13	28	10.6	28	14.1	29	1.6	29	5.1	29	8.7	29	12.2	29	15.7	30	3.2	30	6.8	30	10.3
14	30	13.8	31	1.4	31	4.9	31	8.4	31	11.9	31	15.5	32	3.0	32	6.5	32	10.0	32	13.6
15	33	1.1	33	4.6	33	8.2	33	11.7	33	15.2	34	2.7	34	6.3	34	9.8	34	13.3	35	0.9
16	35	4.4	35	7.9	35	11.4	35	15.0	36	2.5	36	6.0	36	9.6	36	13.1	37	0.6	37	4.1
17	37	7.7	37	11.2	37	14.7	38	2.2	38	5.8	38	9.3	38	12.8	39	0.3	39	3.9	39	7.4
18	39	10.9	39	14.5	40	2.0	40	5.5	40	9.0	40	12.6	41	0.1	41	3.6	41	7.1	41	10.7
19	41	14.2	42	1.7	42	5.3	42	8.8	42	12.3	42	15.8	43	3.4	43	6.9	43	10.4	43	13.9
20	44	1.5	44	5.0	44	8.5	44	12.1	44	15.6	45	3.1	45	6.6	45	10.2	45	13.7	46	1.2

Table XL.—For converting Avoirdupois Pounds and Ounces into Grams.

(Divide the result by 1,000 for kilograms.)

Avoir. pounds.	0.	1oz.	2oz.	3oz.	4oz.	5oz.	6oz.	7oz.	8oz.	9oz.	10oz.	11oz.	12oz.	13oz.	14oz.	15oz.
0	0	28	57	85	113	142	170	198	227	255	283	312	340	369	397	425
1	454	482	510	539	567	595	624	652	680	709	737	765	794	822	850	879
2	907	936	964	992	1021	1049	1077	1106	1134	1162	1191	1219	1247	1276	1304	1332
3	1361	1389	1417	1446	1474	1503	1531	1559	1588	1616	1644	1673	1701	1729	1758	1786
4	1814	1843	1871	1899	1928	1956	1984	2013	2041	2070	2098	2126	2155	2183	1211	2240
5	2268	2296	2325	2353	2381	2410	2438	2466	2495	2523	2551	2580	2608	2637	2665	2693
6	2722	2750	2778	2807	2835	2863	2892	2920	2948	2977	3005	3033	3062	3090	3118	3147
7	3175	3204	3232	3260	3289	3317	3345	3374	3402	3430	3459	3487	3515	3544	3572	3600
8	3629	3657	3685	3714	3742	3771	3799	3827	3856	3884	3912	3941	3969	3997	4026	4054
9	4082	4111	4139	4167	4195	4224	4252	4281	4309	4338	4366	4394	4423	4451	4479	4508
10	4536	4564	4593	4621	4649	4678	4706	4734	4763	4791	4819	4848	4876	4905	4933	4961
11	4990	5018	5046	5075	5103	5131	5160	5188	5216	5245	5273	5301	5330	5358	5386	5415
12	5443	5472	5500	5528	5557	5585	5613	5642	5670	5698	5727	5755	5783	5812	5840	5868
13	5897	5925	5953	5982	6010	6039	6067	6095	6124	6152	6180	6209	6237	6265	6294	6322
14	6350	6379	6407	6435	6464	6492	6520	6549	6577	6606	6634	6662	6691	6719	6747	6776
15	6804	6832	6861	6889	6917	6945	6974	7002	7031	7059	7087	7116	7144	7173	7201	7229
16	7258	7286	7314	7343	7371	7399	7428	7456	7484	7512	7541	7569	7598	7626	7556	7583
17	7711	7740	7768	7796	7825	7853	7881	7910	7938	7966	7995	8023	8051	8079	8108	8136
18	8165	8193	8222	8250	8278	8307	8335	8363	8392	8420	8448	8477	8505	8533	8562	8590
19	8618	8646	8675	8703	8732	8750	8789	8817	8845	8874	8902	8930	8959	8987	9015	9044
20	9072	9100	9129	9157	9185	9213	9242	9270	9299	9327	9356	9384	9412	9441	9469	9497

Table XLI.—For converting Kilograms into Avoirdupois Ounces.

Kilograms.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	35.3	70.5	105.8	141.1	176.4	211.6	246.9	282.2	317.5
10	352.7	388.0	423.3	458.6	493.8	529.1	564.4	599.7	634.9	670.2
20	705.5	740.7	776.0	811.3	846.6	881.8	917.1	952.4	987.7	1022.9
30	1058.2	1093.5	1128.8	1164.0	1199.3	1234.6	1269.8	1305.1	1340.4	1375.7
40	1410.9	1446.2	1481.5	1516.8	1552.0	1587.3	1622.6	1657.9	1693.1	1728.4
50	1763.7	1799.0	1834.2	1869.5	1904.8	1940.0	1975.3	2010.6	2045.9	2081.1
60	2116.4	2151.7	2187.0	2222.2	2257.5	2292.8	2328.1	2363.3	2398.6	2433.9
70	2469.2	2504.4	2539.7	2575.0	2610.2	2645.5	2680.8	2716.1	2751.3	2786.1
80	2821.9	2857.2	2892.4	2927.7	2963.0	2998.3	3033.5	3068.8	3104.1	3139.4
90	3174.6	3209.9	3245.2	3280.4	3315.7	3351.0	3386.3	3421.5	3456.8	3492.1

Table XLII.—For converting Avoirdupois Ounces into Grams.

Av. ounces.	0.	1.	2.	3.	4.	5	6.	7.	8.	9.
0	0	28.3	56.7	85.0	113.4	141.7	170.1	198.4	226.8	255.1
10	283.5	311.8	340.2	368.5	396.9	425.2	453.6	481.9	510.3	538.6
20	567.0	595.3	623.7	652.0	680.4	708.7	737.1	765.4	793.8	822.1
30	850.5	878.8	907.2	935.5	963.9	992.2	1020.6	1048.9	1077.3	1105.6
40	1134.0	1162.3	1190.7	1219.0	1247.4	1275.7	1304.1	1332.4	1360.8	1389.1
50	1417.5	1445.8	1474.2	1502.5	153[illegible].9	1559.2	1587.6	1615.9	1644.3	1672.6
60	1701.0	1729.3	1757.7	1786.0	181[illegible].4	1842.7	1871.1	1899.4	1927.8	1956.1
70	1984.5	2012.8	2041.2	2069.5	2097.9	2126.2	2154.6	2182.9	2211.3	2239.6
80	2268.0	2296.3	2324.7	2353.0	2381.4	2409.7	2438.1	2466.4	2494.8	2523.1
90	2551.5	2579.8	2608.2	2636.5	2664.9	2693.2	2721.6	2749.9	2778.3	2806.6

TABLE XLIII.—FOR CONVERTING KILOGRAMS INTO TROY OUNCES.

Kilograms.	0	1.	2.	3.	4.	5.	6.	7.	8.	9
0	0	32.15	64.30	96.45	128.60	160.75	192.91	225.05	257.20	289.35
10	321.50	353.65	385.81	417.96	450.11	482.26	514.41	546.56	578.71	610.86
20	643.01	675.16	707.31	739.46	771.61	803.76	835.91	868.06	900.21	932.36
30	964.51	996.66	1028.81	1060.96	1093.11	1125.26	1157.42	1189.57	1221.72	1253.87
40	1286.02	1318.17	1350.32	1382.47	1414.62	1446.77	1478.92	1511.07	1543.22	1575.37
50	1607.52	1639.67	1671.82	1703.97	1736.12	1768.27	1800.42	1832.57	1864.72	1896.87
60	1929.03	1961.18	1993.33	2025.48	2057.63	2089.78	2121.93	2154.08	2186.23	2218.38
70	2250.53	2282.68	2314.83	2346.98	2379.13	2411.28	2443.43	2475.58	2507.73	2539.88
80	2572.03	2604.18	2636.33	2668.48	2700.64	2732.79	2764.94	2797.09	2829.24	2861.39
90	2893.54	2925.69	2957.84	2989.99	3022.14	3054.29	3086.44	3118.59	3150.74	3182.89

TABLE XLIV.—FOR CONVERTING TROY OUNCES INTO GRAMS.

Troy ounces.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	31.10	62.21	93.31	124.42	155.52	186.62	217.73	248.83	279.93
10	311.04	342.14	373.25	404.35	435.45	466.56	497.66	528.76	559.87	590.99
20	622.08	653.18	684.28	715.39	746.49	777.59	808.70	839.80	870.91	902.01
30	933.11	964.22	995.32	1026.43	1057.53	1088.63	1119.74	1150.84	1181.94	1213.05
40	1244.15	1275.26	1306.36	1337.46	1368.57	1399.67	1430.77	1461.88	1492.98	1524.09
50	1555.19	1586.29	1617.40	1648.50	1679.60	1710.71	1741.81	1772.92	1804.02	1835.12
60	1866.23	1897.33	1928.44	1959.54	1990.64	2021.75	2052.85	2083.95	2115.06	2146.16
70	2177.27	2208.37	2239.47	2270.58	2301.68	2332.78	2363.89	2394.99	2426.10	2457.20
80	2488.30	2519.41	2550.51	2581.62	2612.72	2643.82	2674.93	2706.03	2737.13	2768.24
90	2799.34	2830.45	2861.55	2892.65	2923.76	2954.86	2985.96	3017.07	3048.17	3079.28

TABLE XLV.—FOR CONVERTING GRAMS INTO GRAINS.

Grams.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	15.43	30.86	46.30	61.73	77.16	92.59	108.03	123.46	138.89
10	154.32	169.75	185.19	200.62	216.05	231.48	246.92	262.35	277.78	293.21
20	308.64	324.08	339.51	354.94	370.37	385.81	401.24	416.67	432.10	447.53
30	462.97	478.40	493.83	509.26	524.69	540.13	555.56	570.99	586.42	601.86
40	617.29	632.72	648.15	663.58	679.02	694.45	709.88	725.31	740.75	756.18
50	771.61	787.04	802.47	817.91	833.34	848.77	864.20	879.64	895.07	910.50
60	925.93	941.36	956.80	972.23	987.66	1003.09	1018.53	1033.96	1049.39	1064.82
70	1080.25	1095.69	1111.12	1126.55	1141.98	1157.42	1172.85	1188.28	1203.71	1219.14
80	1234.58	1250.01	1265.44	1280.87	1296.30	1311.74	1327.17	1342.60	1358.03	1373.47
90	1388.90	1404.33	1419.76	1435.19	1450.63	1466.06	1481.49	1496.92	1512.36	1527.79

TABLE XLVI.—FOR CONVERTING GRAINS INTO GRAMS.

Grains.	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
0	0	0.0648	0.1296	0.1944	0.2592	0.3240	0.3888	0.4536	0.5184	0.5832
10	0.6480	0.7128	0.7776	0.8424	0.9072	0.9720	1.0368	1.1016	1.1664	1.2312
20	1.2960	1.3608	1.4256	1.4904	1.5552	1.6200	1.6848	1.7496	1.8144	1.8892
30	1.9440	2.0088	2.0736	2.1384	2.2032	2.2680	2.3328	2.3976	2.4624	2.5272
40	2.5920	2.6568	2.7216	2.7864	2.8512	2.9160	2.9808	3.0456	3.1104	3.1752
50	3.2400	3.3048	3.3696	3.4344	3.4992	3.5640	3.6288	3.6936	3.7584	3.8232
60	3.8880	3.9528	4.0176	4.0824	4.1472	4.2120	4.2768	4.3416	4.4064	4.4712
70	4.5360	4.6008	4.6656	4.7304	4.7952	4.8600	4.9248	4.9896	5.0544	5.1192
80	5.1840	5.2488	5.3136	5.3784	5.4432	5.5080	5.5728	5.6376	5.7024	5.7672
90	5.8320	5.8968	5.9616	6.0264	6.0912	6.1560	6.2208	6.2856	6.3504	6.4152

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Synopsis of the Proceedings of the Galveston Medical Society at is Annual Meeting, January 8, 1867.

The Society met, pursuant to adjournment, President E. Randall in the chair.

The Minutes of the last Monthly and Annual Meetings read and approved.

Dr. M. Campbell, Treasurer, made his Annual Report, which was received.

The subject of the revision of the By-laws and Constitution was then introduced. Several alterations and amendments to the same were suggested and duly acted upon; they were then adopted as a whole.

On motion, a committee of three was appointed to alter the fee-bill, making currency the standard of charges. Committee—Drs. Dowell, Kelly, and Welch.

Dr. Welch read a paper on the subject of the retention of the placenta, which was promptly relieved by the administration of the bi-carbonate of soda; also a paper descriptive of a case of uticaria (nettle rash), consequent upon the administration of sulphate of quinine.

Dr. T. J. Heard read a paper, subject—diptheria.

On motion, the President was requested to appoint a committee of two to draft resolutions of respect, expressive of the sense of the society,at the death of Dr. Saml. Randall. Committee—Drs. Welch and Campbell. Report received and unanimously adopted.

The censors reported favorably on the application of Dr. F. A. Tompkins. Report received and the applicant duly elected to membership.

Dr. Danells presented applicant for membership. Referred.

The election of officers for ensuing year was next in order The following gentlemen were put in nomination and elected:—

T. J. Heard, President,
J. Boring, 1st Vice-President,
S. M. Welch, 2d Vice-President,
C. H. McGill, Secretary,
R. H. Hanna, Corresponding Secretary,
M. Campbell, Treasurer,
—— Kelly,
G. Dowell, } Censors.
Chas. Trueheart,

President Randall, on retiring, made a few remarks, congratulating the society on their prosperous advancement, and concluded by urging the members to be more prompt in their attendance in future.

Dr. Heard was then conducted to the chair; thanked the society for the honor conferred; asked their indulgence for himself in the performance of his official duties; expressed a hope that the society would continue to prosper, and concluded by recommending a prompt attendance on the meetings of the society.

On motion, the thanks of the society were tendered to Dr. Randall for the manner in which he had discharged his duties as President of the society.

There being no further business, the society adjourned.

C. H. McGILL,
Secretary.

Resolutions on the Death of Dr. S. Randall.

Whereas, it has pleased a Divine Providence, no less all-wise than all-powerful, to remove from our midst our lamented brother, Dr. Saml. Randal, be it

Resolved,—That in the death of Dr. S. Randall the medical profession in Galveston has lost one who was distinguished by his zealous devotion to its cause and his untiring industry in the discharge of his duties; the Galveston Medical Society a most efficient, though modest and unobtrusive member; and the community at large a most worthy and valuable citizen.

Resolved,—That we, the members of the Galveston Medical Society, do offer, by these resolutions, a final testimonial of the high esteem in which we held the deceased, both as a physician and a private citizen.

Resolved,—That a copy of these resolutions be sent to the family of the deceased, be furnished the city papers for publication, and that they be entered on the minutes of the society.

S. M. WELCH, M.D., } Committee.
M. CAMPBELL, M.D., }

Diptheria—Dr. T. J. Heard.

ESSAY READ BEFORE THE GALVESTON MEDICAL SOCIETY, JAN. 3, 1867.

MR. PRESIDENT AND GENTLEMEN:

The subject of diptheria has engaged the best of pens for years, hence, it is hardly to be expected of men from my humble stand-point to offer or put forth anything original.

But, notwithstanding my observations have been limited, when compared with thousands of others, they have been sufficient to enable me to form some opinions as respects the nature and the point especially of greatest interest—the treatment of this affection.

My attention was first called to the importance of this subject by Prof. Jas. Jones, of New Orleans, in the winter of 1844 and 1845. Notwithstanding the impressiveness of his lecture on the subject, in which he very fully portrayed the fearful ravages of the disease in Europe, I could not bring my mind to the realization of the fearfulness of the disorder until I encountered it in this place in the winter of 1859 and 1860.

The affection presented in the main the same features the occasional cases we now meet with do.

The more I have seen of this disease the more I have been persuaded of its zymotic nature, and I risk nothing when I say that such as suffer of this disorder have not been in a good state as regards their general health for some time previous to the attack.

Diptheria may be divided into three stages:—the first I will call the pyrexial stage; the second, the stage of exudation; the third, that of collapse. And, as a digression, I will remark that I think other clearly zymotic affections will be found interrigating nature, so far as regards the stages as above stated, to leave a strong analogy to diptheria, to wit, yellow fever, cholera, &c.

The pyrexial state or stage of diptheria may be of two or three days duration. By friends it is usually regarded as a catarrheal form. Some complaint may be made of soreness of the throat, but it is not usual during the first day or two of the illness to find any well marked diptherial exudation. But so soon as complaint is made, and even in some cases before, an erythematic condition of the parts may be found, which is but too often, in a day or two, found dotted here and there with the white exudation beneath the epithelium, which is distinctive of this disease.

The second stage is marked by the subsidence of the form and by the rapid extension of the diptheritic exudation. During this stage the sub-maxillary glands and the adjacent parts become very much swollen independent of the diptherial exudation so as to render respiration and deglutation very difficult.

The third stage is not one simply of collapse in the common acceptation of the term, but is a condition which I have not witnessed in any other disease. In the early part of this stage, or even before this stage is fully established, the patient may be suffocated from occlusion of the air passage. In cases where there is no interruption to the ingress of air to the lungs, but in which the gastric intestinal mucous surfaces mainly suffer, in such cases I have seen the disease fully set forth. For days I have seen the poor little sufferer wear on, with the smallest thread of pulse, not unfrequently very slow, without the least evidence of warmth about them, the tongue cold and palid yet with the rest, but any kind of ingesta was vomited at once.

It is strange but true; I have seen some of these poor little doomed children, so far from giving any evidence of pain or distress, taking interest in the plays and toys of their little friends to almost their last moments.

If time, and the necessity justified, I could elaborate this paper, and say much on the subject of blood poisoning; but I will dismiss the subject for the present by making a few remarks on the treatment of the disorder.

TREATMENT.

If the patient is seen in the first stage of the disease, the indications are two-fold—1st to abort the form; and, 2d, to correct the abnormal state of the blood. I have used the following with unvarying success:

Take, for a child, say five years old, the following:—Quinine, 3 grs.; cholorate potass., 3 j.; hydrachloric acid, 3js.; water, ii drachs—mix. Take a tea-spoonful in a wine-glass of water every two hours. As the patient improves the remedy may be used at longer intervals, but should in all cases be continued in small doses for a month at least.

If the bowels are confined, I find nothing better than castor oil and oil of turpentine. But all lowering treatment should be scrupulously avoided.

The warm bath has a very happy effect during the first stage, and the free incrustation all over of camphorated oil is very good. The sick should be well clad and be kept warm and comfortable.

After the febrile stage has passed, I have found nothing better to advise than the hydrochloric acid and the chlorate of potassa with infusion of geantian often repeated, the bathing and the incrustation, &c.,as above suggested to be kept up.

From first to last the sick is to have as much good food as they can bear; and, after the first stage has passed, good brandy, wine, or porter, in such quantities as we have good reason to think they can bear.

I use no caustics or gargles, from the fact I have not found any need of them when the above plan has been pursued.

I formerly used such means, greatly to the torture of the patient, without experiencing any benefit from them. To the neck I have used of late nothing except raw cotton, after rubbing the neck well with camphorated oil. This may be repeated every hour or two.

Report of Case of Retained Placenta.

BY S. M. WELCH.

READ BEFORE GALVESTON MEDICAL SOCIETY, JAN. 8, 1867.

As one of the objects of our Medical Society is to stimulate its members to observe and report interesting and instructive cases, and, by an interchange of facts and observations, to render our proceedings a source of improvement, I ask leave to submit the following cases:—

I have to report a case of retained placenta in labor at full term, where the os uteri, though in a dilated condition, was so extremely irritable that all efforts at extraction were found useless, or worse than useless. The patient was a good deal exhausted, the tediousness of the labor and hemorrhage, and the placenta retained its position from want of power in the body of the uterus to expel it. After administering ergot in large and repeated doses without producing any effect, though the medicine, Battley's Liq. Ergotæ, was pure and active. It occurred to me to try the biborate of soda. It was resorted to, and after the second dose of 15 grs. the placenta was expelled by the strong uterine contractions produced. The property possessed by this remedy of exciting the contractive power of the womb, though known to the medical profession, for it is mentioned by most authors in materia medica and therapeutics, as Pareira, Wood and others alluded to in the Dispensatory, is, I believe, less often had recourse to by the physician, at least in this country, for remedial objects then by the professed abortionist to accomplish his base purposes. If the bi-borate of soda exercises this specific influence on the womb, may we not oftener employ it with advantage in cases similar to the above; and in cases of flooding after labor, when it is desirable to produce a tense contraction of the womb? Certainly it deserves a place on the list with ergot, savine and kindred remedial agents.

URTICARIA FROM THE USE OF QUININE.

I may also mention here the case of a lady, from New Orleans, very recently under my professional care, which exhibited some unusual effects, at least to me, from the administration of quinine. She was suffering from intermittent fever and had taken 5 grs. of quinine, on two occasions, before I saw her. Each time a red eruption resembling urtecaria or nettle-rash had appeared over the entire surface of the body and disappeared again on the disappearance of the effects of the quinine. On the following day she took one grain and the eruption appeared. She then thought it time to send for a physician, her fears having become aroused. I ordered for her a purgative, and in a few hours followed it by 5 grs. quinine associated with comp. ext. colocynth and ext. hyaciamus. None of the unpleasant symptoms before mentioned followed. In a few hours I gave her five grains more of the quinine and repeated the dose twice afterwards without again noticing the eruption. I am of the opinion that the purgative I had premised had removed the cause, probably some digestive derangement, which pro-produced the eruption.

GALVESTON, FEB. 20, 1867.

By a resolution of the Galveston Medical Society the undersigned committee were appointed to address a circular letter to the medical profession throughout the country, urging the necessity of establishing county medical societies, in every part of the State, for mutual improvement and the promotion of a spirit of concord and professional courtesy among the entire medical brotherhood, and for the still higher purpose of advancing medical knowledge, enlarging the field of inquiry, and, at the same time, diffusing a large amount of practical information now lying dormant for want of some convenient mode of communication and interchange of opinion.

These primary organizations will lead the way to the establishment of a State Medical Association, a thing greatly to be desired and much needed. In every State where such an organization exists (and it is believed to exist in all the other States) much good has been the result, a great stimulous has been given to medical inquiry and a large increase in the number of the laborers in the broad field before us, with corresponding elevation and usefulness of the profession.

Very respectfully,

D. PORT. SMYTHE, M.D.,
GREEENSVILLE DOWELL, M.D., } Committee.
M. CAMPBELL, M.D.,

Hypodermic Medication.

BY DR. C. LASEGURE.

TRANSLATED FROM ARCHIVE'S GENERALES, JANUARY, 1866.

Hypodermic Injections have, at the present time, entered into the practice of all physicians. They were first introduced by Wood, in 1855, and imported into France, in 1858, by Prof. Bekier. They have become so familiar by use that it seems almost useless to retrace the history of their progress, only so far as to recall the principal indications which they fill.

We have proposed in this review to signalize—first, some of the latest of their applications, and consequently those not so well determined.

Some have tried lately by observation, and especially by facts, to develop the subject even to a theory, or to give a general formulary of the method. Materials were abundant enough to amply justify a synthetical investigation, and the ideas advanced have appeared to us to merit discussion.

The salts of morphia, and more lately of atropifa, have alone been experimented with by the first observers. After ten years of experience, it is yet to active narcotic preparations that we give the first place in Hypodermic Medication.

One may see by the exposed summary of the essays incited, with other agents, how little the subject of Hypodermic Injections has enriched itself with new remedies.

SULPHATE OF QUININE.

The idea of the administration of the sulphate of quinine by the hypodermic method reverts to several years. As early as 1868, Moore recommended this mode of injection in intermittent fevers, founding his recommendations on his own experience and that of Dr. Chassud, of Syrna, who had cured more than one hundred and fifty patients attacked with poludal fevers, with gastric complications of such a nature as to interdict medication by the stomach.

The solution contained 1 gr. 50 * of the sulphate of quinine to 16 gr. of distilled water, acidulated by 8 to 10 gut. of sulphuric acid. The injection was made by a little stop syringe, containing from 2 to 4 grs. of the prepared liquid, inserted at various points—the head of the triceps or deltoid, the thigh, the calf of the leg, in the left Hypocondric reagions, when the liver was violently hypertrophied.

The most favorable time, according to this author, was that which preceded the chill. As to the results, they were superior to those which were usually observed with sextuple doses given in the interval (internally).

Since this, these essays have been repeated with such variable results as to be far from reconciling observers as to the relative superiority of this mode of medication. Prof. Winter has given in his excellent review, (Schmidt's Iarh., 1865, t. CXXVI) a resume from which we borrow some indications.

Pzetler and Framuller are of opinion that we only introduce by the subcutaneous puncture an insufficient quantity of the medicine. Sacmann, on the contrary, reports to have cured, by injection of 10 centi-grs. of the sulphate of quinine, a third day fever which had resisted the ordinary use of a gramme of the same salt given internally. Rosenthal (Weir, Med. Holl., 1864) has obtained the most favorable results from the subcutaneous injection of a solution of 1 gr. of sulphate of quinine in 8 grs. of water without the addition of the acid. Some have injected from 18 to 30 drops of liquid, representing from 15 to 26 centi-grms. of the salt in different regions, and always from three to four hours before a paroxysm.

Drs. Paul and Iarotzky, though they laud the use of the remedy under the hypodermic form, relapses so often return after some weeks, that they think it necessary to recommend the injections only in cases where it is important to affect the system promptly to cut short the attack.

Dr. Gualla, of Brescia, has treated 49 intermittent fevers out of 84, that had been treated, in 1863, at the Island City Hospital, by the subcutaneous method, and he has succeeded in all these cases. He injected, at the internal sides of the thigh, about 1 decigr. of a solution of which he does not give the exact formulary. One single time there followed, as Moore had already observed, some abcesses at the point where the puncture had been practiced; but, as the patient was syphilitic, there succeeded to the abcess some ulcerations which only yielded to a long usage of iodide of potash.

From a communication made to the Medical Chirurgical Society of London, (Dec. 1864) Dr. Desvignes has equally cured some hundreds of the laborers occupied in the labor of excavation of a railroad, and afflicted by different symptoms of malaria, by the injection of 7 to 8 centigrms. of the sulphate of quinine, dissolved in 15 drops of water. Finally we will mention the recent researches of Dr. Pihan Dufeillay.

The hypodermic administration of the sulphate of quinine has the advantage of exercising the least doses of the remedy, to fatigue less the stomach; but these advantages will be almost compensated by the yet doubtful persistence of the cure.

This will be an operative procedure to add to all the others and nothing more.

It is not thus in very young children; we know how difficult it is to employ in them the sulphate of quinine, on account of the intolerable taste of the remedy, notwithstanding the many precautions we have recourse to to dissimulate it. The injections per anum are not retained, and leave the physician in uncertainty of the doses absorbed or even retained by the intestine. Frictions are yet more uncertain.

Dr. Rosenthal has had the happy idea to try this method in very young children, and success has responded to all his hopes. It is to-day a procedure which, making all allowance for objections, ought to hold an important place in infantile therapeutics.

The physician of Vienna has not stopped at this; he has extended the use of hypodermic injections of the sulphate of quinine to other infantile diseases besides intermittent fevers. Neuralgias with periodicity more or less regular, but returning with indisputable paroxysms, have no more efficient remedy than the sulphate of quinine. Children are so rebellious to this means that we have been oblidged very often to give it up.

On the other side, narcotic substances are badly tolerated, and their employment is not without danger in early life. Subcutaneous injections will be called to render important services. It has not only resolved a critical problem, but has opened a newer way to researches than that limited to the use of sulphate of quinine in intermittent fevers by injection. No one has, however, engaged himself in this direction, for we cannot so construe the memoir of Zuelzer, who is an old man afflicted of the stenocordia with forty degenerations of the heart, compliments himself on having injection of the sulphate of quinine.

Dr. Bourdon has been the first in these last times to advise the use of hypodermic injections against rheumatism of a medicament, so frequently and heroically employed internally. One of the students of our honorable college, M. Doduil, has published a conscientious investigation upon this mode of anti-rheumatismal therapeutics, of which we here resume the principles given.

M. Bourdon gives the preference to the following formulary: Distilled water, 10 gr.; bi-sulphate of quinine, 1 gr.; tartaric acid, 50 centigrms. The tartaric acid replaces, as we know, the sulphuric used by the major part of experimentors. This substitute, already advised by Dr. Gualla, has been equally indicated by Prof. C. Bernard as having the advantage of introducing into the orgasm a vegetable acid, always more acceptable than the mineral acids.

We have nothing to note in the operative procedure, the punctures have been made upon the lateral parts of the verterbral column, upon the thighs, and upon the arms.

We have difficulty in estimating the results of a medication, whether it be in acute or subacute articular rheumatism. The metnods the most contradictory are given, both of admitted and disputed success—as vividly attacked, as warmly defended—the comparison wants force because the cases are without parity.

Out of the individual variations, it is still necessary to estimate the influences of climate, season, upon the medical constitution, &c. The means being numerous, it is necessary to represent them by a single hypothetical conjecture, the effects which have been produced, to equal conditions the other remedies, where rheumatism has not, as intermittent fever, pneumonia, or pleurisy, of manifest conclusion. It is languid in its convalescence; acidity gives space to a subacute state which prolongs itself indefinately, and which lasts for months after the observer has failed to notice its exit.

We have not found the elements of a subordination in the work of M. Dodeuil. and consequently have not assigned the hypodermic use of sulphate of quinine any way whatever upon the scale of anti-rheumatismatic remedies.

The observations, resumed as it appears in a memoir of this kind, has some inevitable omissions.

The first patient observed, age 42 years, had been attacked for twelve days of rheumatic fever without cardiac complications. The injections are used each day in doses at first increasing from 0,25 centigr. to 90 centigr. of the sulphate of quinine, and afterwards gradually decreasing the doses even to the minimum limit of 30 centigr. The treatment lasted from the 25th of March to the 7th of April; from this date the patient is put upon the use of the wine of quinine. As the digestive ways are good, the appetite improved, the convalescence was rapid. In this patient, where the fever was always so moderate that the pulse did not exceed 88, it is not sufficient to know that the convalescence was uninterrupted, without stating in what time and under what incidents it passed to a cure. In the other observations we find almost invariably the same formula: convalescence was rapid, except one time the patient left even before convalescence had set in.

The duration of treatment had been of two days in observation two, but the patient was free from fever; the rheumatism dates from two months, the pains moderate, occupied only two articulations. The patient aged 56 years, had been submitted to treatment by the sulphate of quinine, and by morphine internally with little success.

In observation six, the injections had been continued from the 27th of April to the 18th of May. The rheumatism developed in a woman of 36 years, had a vivid intensity, and was accompanied in its course by grave complications, cerebral accidents, periodic expression, and pleurisy.

Some have said that the medication has been exempt from inconveniences, except some abcesses supervened at the points where the punctures had been made, and rapidly healed. M. Deuil has not contented himself by observing the therapeutic results. He has sought to profit by the experiences instituted at the Maison de Sante, to study the physiological process of absorption of the medicament.

The injection of a strong dose has appeared to him to have a double advantage, a more fixed action, and absorption more prompt. In injecting 10 centigrs. at a single time, it has produced a falling of the pulse in three-quarters of an hour, and appearance of the sulphate of quinine in the urine in less than twenty minutes. The effects upon the eyes and the ears are more slow than the effects produced on the pulse. The roaring in the ear and the trouble in the sight has not appeared in a precise manner in less than two hours and a half. Their duration was variable and they returned by intervals, two or three times in the day.

The duration of the elimination of a dose of 40 centigrs. is generally of 24 hours; that of a dose of 20 centigrs. appeared after to terminate in 9 hours.

DIGITALINE.—Amongst the substances besides the narcotics, to which Wood had at first entirely limited the method, there are scarcely any that deserves to be mentioned, such as, for example, digitaline, which Frenmuller advises after having employed it, said he, with success in diseases of the heart not well defined. Digitaline gives to its name a favor which should not last—an uncertain medicine, of a composition almost unknown, it is far from representing the therapeutic principle of digatalis, and it seems rather to concentrate its toxic element. Difficult of administration on account of the small amount that makes a dose, it does not respond to any of the indications which the digitalis is so apt to fill. It not only has not added anything to our resources, but has placed the medicine in a false view in habituating us to treat the diseases of the heart by insignificant doses, contrary to that which experience teaches, which shows the utility of large doses. Subcutaneous injections have no reason to be adopted in diseases of every elimination, progressive where it is important above every thing to oppose a remedy equally durable and continued in its effects.

Some essays reported without force, with short observations, as those upon which some have retired, unhappily, too willingly, the therapeutic recommendations call forth neither discussion nor examination.

STRYCHNINE.—The same is not the case with strychnine which, on the contrary, ought to be given in an intermittent manner, and to thus say by intermissions. One has not the possibility, with strychnine, to maintain a continued action, and the end to which we propose—the only one to which we could pretend without grave dangers—is to avert momentarily the nervous irritability. Prof. Courty, of Montpellier, has presented to the Academy of Medicine, in 1863, a note upon the good effects to be obtained through the use of injections of strychnine in cases of paralysis of the face and the inferior extremities.

In Germany, where there appears to have been the most frequent resort to this means, they use by preference a solution of the nitrate of strychnine, in the dose of from 4 to 5 milligrs. to each injection, in variable quantities of excipient.

The observations which follow and of which we give a short resume, are not without interest.. A young girl of 26 years, afflicted with spasmotic contractions of the right side of the face, had already been affected five years before with an inflammatory cerebral affection. The spasms, the tics not painful, succeeded one another at intervals more or less regular; they occupied more particularly the upper lip, and the alar of the nose. Injections of morphine and atropine had been tried without any advantage; the convulsive movements extended to the sterno-cheido-mortudeus of the right side, thence to the arms: deglutition and articulation were almost impossible during the access. The application of ice and leeches did not modify the disease. The injections of the nitrate of strychnine in a dose of 4 milligrs., each repeated at intervals of two days, led to a perfect cure.

Sonder, who reports this fact, borrowed in his practiece—excuses himself of having tried the employment of strychnine in a case where it seemed so little justified; he invoked the theory of Kolliker, in virtue of which the excess even of excitation had for effect the rendering of the muscle less excitable. So significant had been the result, so much more conclusive had been the theory, he trusted more of the same kind to encourage the experimentors.

A young girl of 20 is taken, in consequence of a probable cooling, with hoarseness and very soon with asthma. After one year useless attempts, Dr. Waldenburg deagnosed a paralysis of the muscles, crico-tyroideus and a catarrhal affection of the mucus membrane. The catarrh is cured by inhalations, but the asthma persisted. The patient obtained her cure at the end of a month, and in consequence of the eleven injections of strychnine practiced on the sides of the thyroid cartilage.

A third fact has treated equally to an asthma caused by a paralysis of the vocal cords. The articulation was lost for two months and a half. Ten injections, representing a total dose of three centigrs., ameliorated the movements of the tongue, without curing the asthma. Local cauterizations with the solution of nitrate of silver completed the cure.

Before conclusion as to the efficacy of the means, it is good to place certain reservations. At first strychnine has produced no appreciable physiological action. This proved that it had been used in proportions relatively too feeble. In the second place the patients, young girls subject to all defined nervous accidents, more or less hysterics, presented themselves unwillingly to a resort of this kind if those upon it had failed to follow. Finally the subcutaneous injections of strychnine are added to the other modifications or have been ulteriorly seconded by topical applications.

We are actually in such a state of indecision ralative to the administration of strychnine in paroplegics, to a hoarseness at a certain period, a defiance so legitimate, has succeeded as to preconceive a mode of administration, it would become necessary to understand the advantage of the remedy in itself, some passages that are open to absorption. In this point of view all is to be done or not to be done, and the failures sufficiently balance the benefits as to cause strychnine to be banished almost entirely from the catalogue of Ati-paralytic remedies. The only fact that remains to be inquired after, and it is necessary to consider it, that is whether we can with impugnity inject under the skin from 4 to 5 milligrs. of the nitrate of strychnine.

American Medical Association.

Office of Permanent Secretary,
Wm. B. Atkinson, M.D,
215 *Spruce St.*, *Philada.*

The Eighteenth Annual Meeting of the American Medical Association will be held in Cincinnati, on Tuesday, May 7th, 1867, at 11 o'clock, A.M.

The following Committees are expected to report:—

On Quarantine, Dr. Wilson Jewell, Pa., Chairman.
On Ligature of Subclavian Artery, Dr. Willard Parker, N.Y., Chairman.
On Progress of Medical Science, Dr. Jerome C. Smith, N.Y., Chairman.
On the Comparative Value of Life in City and Country, Dr. Edward Jarvis, Mass., Chairman.
On Drainage and Sewerage of Cities, &c., Dr. Wilson Jewell, Pa., Chairman.
On the Use of Plaster of Paris in Surgery, Dr. Jas. L. Little, N.Y., Chairman.
On Prize Essays, Dr. F. Donalson, M.D., Chairman.
On Medical Education, Dr. S. D. Gross, Pa., Chairman.
On Medical Literature, Dr. A. C. Post, N.Y., Chairman.
On Instruction in Medical Colleges, Dr. Nathan S. Davis, Ill., Chairman.
On Rank of Medical Men in the Army, Dr. D. H. Storer, Mass., Chairman.
On Rank of Medical Men in the Navy, Dr. W. M. Wood, U.S.N., Chairman.
On Insanity, Dr. Isaac Ray, R.I., Chairman.
On American Medical Necrology, Dr. C. C. Cox, Md., Chairman.
On the Causes of Epidemics, Dr. Thomas Antisell, D.C., Chairman.
On Compulsory Vaccination, Dr. A. N. Bell, N.Y., Chairman.
On Leakage of Gas-Pipes, Dr. J. C. Draper. N.Y., Chairman.

METEOROLOGICAL TABLE FOR JUNE, 1863, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE	1-3P M	SUN SET	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Mon..	1	91, 95	98, 92	29.93	S1-2....S3-4	S2-4........S2-4	73	91	81	82	cc7....cidci3	ce3....0			
Tues.	2	89....93	88, 87	29.90	S1-2....S3-5	S3-4........S2-4	69	89	78	78	cc1....cc3	cc4....cnstr1			
Wed..	3	93, 97	98....98	29.95	0........S2-4	S2-4........S1-2	70	92	76	79	cc2....cc5	cc4...ccen5...str1			
Thurs	4	96....95	90, 89	29.93	0........S3-4	S3-5..S3-4	72	93	80	81	.......cc6	cc4....ec3...cnsi	fog		
Fri...	5	90	96....97	29.94	0........S3-4	S3-5..S2-5..S2-3	73	93	83	83	0.....cc6	cc6....cc4.......0			
Sat...	6	00	08....06	30.04	0........S3-4	S2-3..S2-5..S1-3	74	94	83	84	str1....cc3	ce6....cnci4....ci1			
	7	07, 11	04, 04	30.07	0........S2.4	......S1-4..S1-3	71	96	85	84	cc5....cc5	........cc1.......0			
Mon..	8	06, 09	05....99	30.04	NW0-1...SW2-4	S2-4........1-3	70	94	82	82	cistr2... cc5	cc1.....ci1.....ci1			
Tues.	9	96....99	87	29.93	0........S2-4	S2-4..S2-5..S1-3	71	92	80	81	ci1....cc3	cc5....cicc4....cicc3			L to N W
Wed..	10	92	95....88	29.91	0........S4-5	W4-5.W2-3.S2-3	73	94	83	83	cncc6....cc5	cc7....cc4.......0			L to N E
Thurs	11	95, 00	94, 96	29.97	0........S2-4	s2-4,sw2-4 NW4-6	76	93	81	83	cc7....cccn4	cccn5.cndci5.cnstr10		ths	to E W N&S
Fri...	12	99, 09	00, 00	30.05	0........E2-4	E1-3..N2-4.E3-4	72	94	85	84	cc4....cncc2....ci1	........cncc2....ci1			L to E
Sat...	13	03, 07	04, 02	30.04	0........E2-3	E2-4.E2-4.SE1-2	70	93	84	82	cicc2....cc1	cncc5........cccn2			
	14	04....06	00	30.03	0........E2-4	..NE2-4....E2-3	72	94	85	84	cnstr1........cn5	cn4........ec1			
Mon..	15	04....06	98, 98	30.02	0........S1-2	NE1-3......E1-2	71	94	86	84	cncc2........cn5	cn5....cc4....cc3			L to E
Tues.	16	99, 09	98....85	29.09	0........S1-2	SE2-3, E2-3 SE2-3	70	93	82	82	0....ci1	cn6....cn6....cnco4			L to NW
Wed..	17	96, 97	92, 87	29.92	0........E1-3	E2-4........E1-2	69	92	85	82	cnccstr3..cnstr2	cn6........cncc3			
Thurs	18	86, 91	87, 85	29.88	0........E2-4	NE2-4,E2-4.E0-1	70	93	86	83	0....cn5	cnco6........cccn2			
Fri...	19	91, 95	95, 90, 90	29.93	0........W2-4	E2-4..S1-3..S2-4	71	98	86	85	cidci3..0	cc2....cn4....dcici7			
Sat...	20	94, 96	96, 92, 93	29.94	0........S2-4	S2-4.SE3-5..S2-4	73	95	85	84	cidci3..cccn5	cs2..cn7..cndci3...0			L to S
	21	94, 96	96....96	29.95	0........E4-6	E3-6........E2-4	73	88	89	81	cidcicn5..cnci6	cndci6........cicn5	spr	thsN W	
Mon..	22	99, 00	99, 97, 98	29.98	E2-4.....E2-4	E2-5,SE2-5,SE2-4	72	86	79	79	cccn8....ccs9	cccn9....cc7....ces8	spr	spr	
Tues.	23	97, 99	98....59	29.94	SE1-2..SE1-2	S1-2..S1-2..S1-2	75	77	78	77	cicc7..cncc9	cnccn10...n10...n10	....shr	shrs R	R L......L
Wed.	24	93, 97	95, 92	29.94	S1-3....S3-5	S4-5..S2-4..S2-3	77	84	79	80	dcscc5..cc9	ccn0..ccn10...ccn10			
Thurs	25	97, 03	02....03	30.00	S1-3....S2-4	S2-4........S1-3	76	86	80	81	dcicn9..cccn9	cncc9........cicc5			
Fri...	26	04, 08	06....05	30.06	S1-2....S2-4	S2-4........S2-3	75	90	79	81	cidcicn5..cncc7	cnci5........dcis3			
Sat...	27	06, 09	09....06	30.07	........S2-3	S2-4........S2-3	73	92	82	82	ccs2....cn6	cn6........0			
	28	05, 07	95....95	30.01	0..........	S2-4..S3-5	73	93	83	83	cccn8	cc3........0			
Mon..	29	94, 95	90, 87	29.[illegible]	0........S3-4	S3-5..S3-5..S2-3	73	93	83	83	cicncc2..cncc7	cn4cn4........0			
Tues.	30	89, 95	93, 92	29.9[illegible]	[illegible]1-2....S3-4	S3-5..S3-5..S1-3	75	94	82	84	cnci2...cncc6	cncicc5........cicn2			
					Force of wind	as 3.09 is to 10.					Amount of clouds	as 3.04 is to 10.			

Max. range 30.11 ; min. 29.85. 29. 97.30 mean of the month. 82°00 mean of the month; max. temp. 96. min. 69°

GENERAL REMARKS.—6th—First watermelons in quantity from Galveston. 11th—6 p.m., quite a gale, 15th—Hazy all day. 16th—Do. do. 17th—Do. do. 19th—Winds varying at short intervals. 20th—Do. do. from N.W. to S.E. 21st—Shrs. at Galveston this morning. 24th—Light rains to S.E. and S. all day.

METEOROLOGICAL TABLE FOR JULY, 1868, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE...	1-3 P. M.	SUN SET...	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Ved..	1	98, 04..	.. 97, 97	30.00	0....S2-4........	S2-4, S2-4, S1-3	75	93	83	84	cicc3..cnccci7......	cncc5..cicn4..cistr3	....	ths NW....	L to NW..
hurs	2	04, 07..	.. 04, 08	30.05	0....S1-3........	SW1-3, E1-3, S1-2	74	90	80	81	cnstr3..cncc4.......	cnci5........cndcis5	R............	shr, shr....	....
ri...	3	07, 09..	06....05	30.07	0....S1-3........	S1-2, E1-5, SE1-3	73	93	81	82	cistr2..cc3.........	cnci5..........cncc5	....	shrs........	....
at...	4	05, 07..	02....00	30.04	0....S1-3........	S1-3........S1-3	73	92	82	82	ci1..cc4............	cc4...........cnci1	....	....	....
	5	01........	00....95	29.98	0....S1-3........	S1-2........S1-3	72	91	83	82	cc1..cccn7..........	cncccci6.......cnci3	....	thr Easwspr	....
lon..	6	96, 00..	94	29.97	0....S1-3........	S1-2........S1-2	73	95	84	84	strci3..........cc4	....cndcicc6..dcici3	....	shrs SW...	....
ues.	7	96, 03..	.. 97, 96	29.99	0....W2-4........	SW1-3......S1-2	73	95	87	85	0....cc3............	cncc3...............0	....	....	....
Ved..	8	08, 07..	....97..	30.02	W1-2, W2-4....	NW2-4.. NW2-4	76	96	85	86	cc4....0............	cc1.........cnccstr6	....	thrs N & E	....
hurs	9	99, 98..	96,95, 93	29.96	0....SW2-4......	N4-6, N2-4, S1-2	75	94	80	83	ccdci2..ccci5.......	dcicc7.........dcis7	..........shrN	....	shrs at almost every point, mostly N & NE.
ri...	10	92, 94..	88,86, 95	29.91	N01....W1-3...	S1-2, N3-4, S1-2	74	85	77	79	cncicc6..cncc7......	cncc7.......cnccn7	..........shr	..........shr	
st...	11	95, 98..	.. 93, 95	29.95	N1-2, SW1-3....	S1-3.......W2-4	71	94	80	82	cncc9..cncc5........	cncc7.........dcicn7	spr ths S....	ths SE spr	
	12	96....99	.. 95, 97	29.97	S1-2........S2-4	....S2-4....S1-3	70	90	72	77	dcicicn4............	dcicn7..........cnn9	....	ths........	
on..	13	99, 02..	.. 97, 98	30.00	0................	W1-2.......W0-1	70	87	78	78	fc10..fc10..........	fc10............fc10	....	fog........	....
ues.	14	04, 06..	03....02	30.04	0....N1-2........	S1-2..........S1-2	72	89	80	80	......fc10..........	fc10............fc10	fog..........	....	....
ed..	15	07, 09, 10	.. 06, 08	30.08	0....S1-2........	S1-3, SE1-3....	72	91	82	82	......cc4...........	cccn8..cncc8.dcicn5	fog..........	....	....
hurs	16	08, 10..	07....04	30.07	0....S1-2........	S1-2........S1-3	72	90	82	81	0....cccn5..........	dcicn10.......dcici4	....	....	....
ri...	17	02, 06..	.. 98, 97	30.02	0....S2-3........	S2-3..S2-4......	72	92	81	82	......cccn6.........	cncc6..........ccci3	hazy..........	....	hazy........
it...	18	08....07	04	30.05	0....S2-4........	S2 4........S1-3	73	91	83	82	cnstr..cccn6........	....cncc4.......ci4	....	....	....
	19	07, 12..	....08..	30.09	0....S2-4........	........S2-4....	73	92	82	82	ci2..cncc5..........	...........cicnstr4	....	....	....
on..	20	08, 09..	04....03	30.06	0........S2-4...	SE1-2......S2-4	73	95	83	84	cncc2........cncc4	cn5..........cidcis3	....	ths spr W..	....
ues.	21	00, 03..	97....91	29.97	0....S1-3........	S1-3........S1-3	74	94	85	84	0....cc3............	cc3............ci3	....	....	L to E......
ed..	22	95, 01..	.. 98, 01	29.98	S1-2....SW2-4..	S1-3........S1-3	76	93	84	84	dcicc9..ccci5.......	ccdci6.............	spr..........	....	ths NW....
hurs	23	06, 08..	05....06	30.06	0....W2-4........	S3-4........S1-3	74	92	85	84	cicn6..cncc5........	cnci5............ci3	....	....	....
ri...	24	07, 07..	03....03	30.05	0....SW2-4......	S2-4......SW1-3	73	95	84	84	ci2..cc4............	....cc3............0	....	....	....
it...	25	05, 07..	06....01	30.04	0....S2-4........	S2-4, S1-4, S1-3	73	96	86	85	ci2..cc6............	cc5....cncc4......0	....	....	....
	26	05, 09..	.. 04, 05	30.07	0....SW1-3......	S2-4......SW1-3	75	98	85	86	cc2..cc4............	cc4................0	....	....	L N W....
on..	27	08, 13..	10....06	30.10	0....SW2-4......	....SW1.2......0	74	98	87	85	ci2....cncc5........	....cncc7.....dcistr	....	ths........	....
ues.	28	07, 09..	.. 01, 02	30.05	0....S2-5........	S2-5........S1-2	74	98	83	88	cicc3.....cc5....ci2	....cicn3..........	....	....	....
ed..	29	02, 07..	.. 04, 04	30.04	0....S2-4........	S2-5........S1-2	74	98	81	82	ci2..cidci7.........	dci7............ci3	....	....	....
urs	30	06, 10..	.. 07, 06	30.08	0....S2-3........	S2-4........S1-3	73	94	83	83	cicc3..cc3..........	cc4................0	....	....	....
ri...	31	07, 09..	.. 05, 04	30.07	0....S1-3........	SE1-3......S1-2	74	88	81	79	ci1....cc8..........	cncc...............0	....	ths........	....
					Force of wind	as 2.45 is to 10.					Amount of clouds as	4.46 is to 10.			

ax. range 30.'18; min. 29.'86. 30.'02,35 mean for the month. 82°80 mean of the month. Max. range 98°; min. 70°.

GENERAL REMARKS.—2d, Showers to S. and W., 6 to 7 a.m.; ths. to N.E. 3 a.m. 5th, Peaches first in market. 12th, Heavy ths. (4 to 6 p.m.) passing to S.E. 13th, M., fog descended to ground. 15th, Hazy all day. 16th, Do. do. 23d, Sweet potatoes first in market. 27th, Shrs. at all points between 1 and 4 p.m.

TIME.

METEOROLOGICAL TABLE FOR APRIL, 1863, AT Houston.

Mon.. Tues. Wed..	ER. . M.	MEAN OF BAR.	WINDS.		SUN.. RISE.	1-3 PM	SUN.. SET..	MEAN THER.	CLOUDS.		RAINS, FOGS, &C.		
			A. M.	P. M.					A. M.	P' M.	A. M.	P. M.	NIGHT.
Thurs	28	30.33	0......E1-2.....	SE1-2...S1-2...S1-3..	40	72	68	60	0.........0..............	0..........0..........0	....	....	....
Fri...	08	30.15	S1-2...S2-8.....	S2-4....S2-3....S1-2..	47	79	70	72	0.........0..............	0..........0..........0	....	....	....
Sat...	06	3 .09	0......SW1-2...	NW1-2....W1-2......	50	82	76	69	Fog.....0..............	0..........0..........0	fog............	....	....
	10	30.18	E2-3...E3-5.....	SE3-5...S1-0	54	72	64	62	ci2.......ci2..........	ci2.....cidci3 .....ci4	....	....	....
Mon..	08	30.12	0 .....SE1-2 ...	N1-2..N12....S2-4.....	48	77	70	65	cc6.......cc8..........	ci5.... cc5......dcicc8	....	hazy.......	....
Tues.	07, 06	30.09	0......N1-2	E1-3..NE2-3...0.......	56	83	73	71	.........0..............	0..........cc1......0	fog	....	....
Wed..	07	30.10	0......E2-3.....	SE2-4..SE2-4..SE1-2..	53	80	68	67	0.........0..............	0..........0..........0	....	....	....
Thurs	06	30.09	0......S2-3.....	S2-4..S2-4..S1-2......	57	80	70	69	........cncc6..........	cc4....cc3.......cis2	....	....	....
Fri...	05, 05	30.06	0......S3-5.....	S3-4..S3-4..S2-4......	57	82	70	70	ci1......cncc6..........	ci1....cicc3.....cistr4	....	....	....
Sat...	93	30.00	0......S2-4.....	S4-5..S4-6..S3-5......	60	75	70	68	cis4......dcicc10. ...	cc10.dcicccn..10dcisn6	....	....	1 to n.......
	03, 02	30.02	S2-3...S2-5.....	S4-4..S3-5..S1-2......	65	78	73	72	cidcish3.....ccn......	cccn7...cicc6...ccstr6	....	..R..........	....
Mon..	97	30.01	0 ......N1-2	SE2-3...S2-3...S2-3..	65	80	71	72	........x10..........	cncc8..cncc10...ccstr7	fog...........	spr thrs....	....
Tues.	, 78,76	29.82	S1... S2-3.....	S4-6.....S4-5.........	65	72	62	66	cccistr5....cncc10	ccn10....ccn...9cncc4	..ths shrs..	....	....
Wed..	93, 94	29.90	W1-2..W2-4	NW2-4..NW2-4..N1-2..	58	73	69	63	0.........0..............	ci1.........0..........0	....	....	....
Thurs	94, 93	29.98	0......E1-2,.....	SE1-2...S1-2....S1-0..	47	74	70	64	cis1......0..............	0..........0..........ci2	....	....	....
Fri...	, 93,91	29.93	0......S2-4,.....	S3-4..S3-5 ..S1-2......	55	75	70	67	cidci7....cccn8.......	dci9...dcicc9...cccis2	....	....	....
Sat...	9....87	29.90	S1-2..S3-4.....	S2-4..S2-5..S1-2,.....	64	82	72	73	........cc6..........	cc4......cc8.........ci2	fog...........	....	....
	. 90, 93	29.90	S1-2...S2-4.....	S2-4..S2-4..S2-8......	71	83	77	77	rf 10....cc10..........	cc8....cc5.........ccs8	fog, raining	....	ths noe......
Mon..	8....05	30.06	N3-4...N2-4	N2-3 ..NE1-2 ..NE1-2..	65	83	76	74	ccs2.........0..........	2..........0 0	....	....	....
Tues.	. 03, 00	30.05	N.E0-1 E2-3.....	S3-4..S3-4..S2-3......	55	81	74	70	ci4..........0..........	cc7... cncc6...cccn10	....	....	spr...........
Wed..	. 03, 00	30.03	S1-2 ...S2-4.....	S2-4..S2-4..S1-2......	70	85	75	77	rf 10....cncc8..........	cncc6....cncc5.....cis4	fog, raining	....	1 to n.......
Thurs	. 00, 99	30.03	0 ....SW12...	SW1-3...S2-4...S1-3..	69	87	77	78	........cncc9..........	cnec7...cn5 ..dcicccn8	fog...........	....	spr ....1....
Fri...	. 92, 88	29.93	S2-4.....S2-3	S3-4..S4-5..S2-3......	70	87	75	77	cccns9..................	cn5....cccn2....cistr7	1 spr	....	....
Sat...	8....85	29.87	0.......S2-4	S3-4..S3 4..S1-3......	67	87	76	77	cis3.................cc2	........cc2.....custr4	....	....	....
	0....84	29.87	0.......S3-4	S3-5..S3-5..S1-3......	67	86	76	76	rf4........cc5..........	cc5.. ..ccJ.....cidci7	....	....	ths.........
Mon..	3, 97,73	29.85	S3-5..S2-4..S3-4	w3-4w2-3sw2-4w1-4s2-4	67	78	70	72	ns9........dcicistr ...	ccn10..n10..n10..ccn9	R............	ths R.......	....
Tues.	87....86	29.90	N1-2s1-2w1-2N1-2	N2-4......0.......E0-1	64	76	75	72	n10.........n10	ccci7....cc3.cc2.cistr3	R....R.......	....	....
	93....90	29.93	0.........E1-3....	S1-2...W3-3....SW1-2	66	81	76	74	cicc4.........dcicc7...	dcicicn7...cc5...dcici7	....	....	....
	89....75	29.87	N1-2.....E2-3....	S1-2....N1-2......E2-4	63	81	72	72	cis2.........cicc2.....	dci10..............dcin10	....	....	....
Max. ra	. 95, 95	29.97	NE1-2..E1-2....	SE1.3......SE1-2.....	64	77	72	71	ccg10.........dcis9....	cccn9.............ccs8	spr...spr...	....	....
Gr. Winds			Force of wind	as 2.86 is to 10.					Amount of clouds as	4.64 is to 10...........			

min. 29.'73. 29.'99. 93 mean for the month. 67°20 mean of the month. Max range 87° ; min. 40°.

ARKS.—1st—Large flock of wild geese going north. 4th—Hazy all day; dry, chilly air. 5th—First mocking-birds heard singing. 6th—Hazy all day. 7th—
s in market. 8th—Hazy all day; air very dry for 8 or 10 days past. 9th—Hazy all day. 10th—Whippoorwill and wood-pigeon heard first time. 11th—Slight
n ths. about (4 p.m.) one-third inch in diameter; wind at every point; negro killed by lightning; much water fallen. 14th—Air damp. 15th—Marten birds
Fire-flies first seen; Irish potatoes in market. 20th—3 p.m., upper currents from S. and N., the S. prevailing. 21st—Running fog at night. 23d—Swallows
h—Fine rains; winds very variable; 4 to 5 p.m. a squall from the S. 28th—At half-past 8 a.m. bar. at '89—at 6 o'clock, at '86. 29th—8 o'clock p.m. bar. rose to
market.

THE

Galveston Medical Journal.

VOL. II. FEBRUARY, 1867. No. 2.

The Great Medical Republic.

BY A. P. MERRILL, M. D.,

After ages of improvement and expansion the medical profession has become a world-wide Republic. Every good member of this Republic is both a law-maker and a law-abider. Whenever he ceases to be either, he becomes properly an alien, and no change of residence or country should save him from the fate of an outcast. In this professional Republic, written laws and constitutions are not required, because of the exietence of an all-prevading common law, which is of paramount authority. All voluntary associations among its members, therefore, are subject to its authority without the formality of special enactments. This common law is as necessary to this Republic as the law of gravitation is to the solar system. Let it be destroyed, and, like the natural world deprived of law, all is chaos and disorder. Exclusive systems can no more be tolerated in this Republic than exclusive opinions and practices, and no man or set of men can make a rule for the government of all, unless it be approved and adopted by each individual member.

This Republic is founded upon Medical Science, which requires of its votaries constant and unwavering publicity in all their professional acts. Discoveries and improvements must ever be open to the scrutiny of mankind. Every member is expected to be active in making them ; but he must neither disguise the truth, nor render his discoveries subservient to personal advantage. To find new remedies for disease, or new virtues in old remedies; to construct new formulæ, and to propose new adjuncts to remedies long in use; to condemn the abuse or unskillful employment of remedies, however valuable, on all legitimate and meritorious duties; and it is for the profession at large to put such inovations to the test of the *experimentum crucis*, and to approve, modify and condemn, as judgment and observation may dictate. The decisions of such tribunals are final, and inovations must submit to them without appeal.

Under the influence of strong inducements, individuals may be led astray, especially in the use and recommendations of nostrums sanctioned by influential names. A druggist or pharmacentist who places at the head of his ingenious compounds such harmless names as sarsaparilla or buchu, with the assurance that all the remaining ingredients are harmless adjuvants to these, may, perchance, gain the approval of some not over-careful physicians, who thereby acknowlege, virtually, that they place more confidence in such non-professional remedies, than in the approved formulæ of the profession. They can hardly justify themselves before the just tribunal of the Medical Republic. But they are scarcely more culpable than such as refuse to their medical brethren the use, at their discretion, of long approved articles of the *materia medica*.*

Rare as are the transgressions of physicians against the common law of the profession, it is proper that journalists should detect and expose them; and the higher the station of the offender, the bolder should be the denunciation. The increasing demand for *nostrums* and for the adoption of *systems in medicine*, render it necessary that the common law of the profession should be rigidly enforced in all its bearings; and to the journals, volunteer exponents of this law, we must look for watchful care in regard to these matters.

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*Referring to an order of the Surgeon-General, still in force, forbidding the supply of calomel and tartar emetic to army surgeons—the climax of charlatanry.
[Dr. Taylor informs me that this has been rescinded.—EDITOR.]

◆

Phthisis Pulmonalis—Consumption.

The deposition of *tubercle* in the pulmonary tissue is one of the most common diseases that attacks the human family, and it occurs in all countries and amongst all races and colors. The depositions of tubercle is not confined to any tissue, but is more fatal when it attacks the lungs, *phthisis pumonalis*; or the lymphatics, *scrofula*; or the brain, *tuberculosis meningitis*; the mesentery, *tabies mesenterica*.

These portions of the body being more prone to the depositions of this matter, and about in the order in which we have given them. It prevails more extensively than any other disease, and out of the nine hundred and sixty-eight millions (9,680,000) of inhabitants of the globe about 3,000,000 die annually. That is about one in every 32.266 of persons living, die every year of this disease alone, which is greater than any other disease, except those that occur epidemically, such as cholera, influenza, and variola, before vaccination was discovered and used. From this statement it will be seen how important this subject is to every physician.

HISTOLOGY OF TUBERCLE.

Tubercles are of two kinds—gray, milary; and yellow, coalescing tubercle; encysted tubercle.

Tubercle signifies tumor, in both instances, but in the former there are single deposits of grey, transparent matter, principally albumen and the salts of lime. In the latter, yellow matter, albumen, lime and oily particles.

Miliary tubercles are diffused through the tissues which they infest, and do not soften but ulcerate out in hard bodies.

Coalescing tubercle is deposited in eggregation and softens by ulceration. Both kinds are miliary in formation, and are cells peculiar to this discrasia. Until the investigations of Robin and Virchow they were supposed to be heterologous or heteromorphus; but they have proved that all the supposed heterologous formations are similar to tissues in the body, and they are cells, one called cytoblastions; the other nuclei The former are hard and transparent, the other soft and oily. Both believed by Robin and Virchow to be connective tissue filled with albumen and the phospates and carbonates of lime.

These cytoblastions, when viewed by a microscope, appear of various sizes, forms, and consistence, and are composed, or compose, moleculesr or nuclei of irregular shape.

The forms of tubercles are miliary—like millet-seed. *Infilterated tubercle*, in patches or masses; *encysted*, surrounded in a mass by cyst; *calcarious*, loaded with chalk or lime. Sometimes they are soft and at other times hard as stone. They are, therefore, sometimes indurated, soft, cheesy, diffluent, waxy or calcarious.

When pressed between two glasses and examined by the microscope they have an irregular shape—round, oval or triangular, and varying in diameter from $\frac{1}{2000}$ to $\frac{1}{1200}$ of an inch. These contain from one to ten granules, and are rendered transparent by acetic acid, but unaffected by water.

There is very little difference between recent tubercles and other albuminous compounds.

We have given the opinions of Robin and Virchow as to the formation, and we here quote from Dr. Bennett, that "Everything that I [He has] have seen of tubercles tends to convince me that it consists of an exudation which

has little tendency to pass into cell-forms. The original albuminous molescular matter melts into nuclei, which constitutes the tubercle corpuscles, and are developed no further. * * * * * * * *
I am persuaded * * * that tubercle is a histogenetis and not a histolytis process, and that as such it may be easily demonstrated in every organ which it attacks;" and he regards tubercle as an exudation, that may be poured out into all vascular textures in the same manner and by the same mechanism as occurs in inflammation, and is incapable of undergoing the same transformation from defficiency of vital power.

CAUSE OF TUBERCULOSIS

Is the weakness or debility from impairment of nutrition. This may arise from any of the following causes of disease:

1st, Loss of *blood;* 2d, loss of *food;* 3d, *excessive purgation;* 4th, *breathing impure air;* 5th, *loss of sleep;* 6th, *excessive muscular effort;* 7th, *extremes of temperature;* 8th, *mental shock;* 9th, *protracted anxiety of mind;* 10th, *hereditary diathesis;* 11th, syphilis; 12th, variola; and 13th, *pustulation.*

One or all of these causing a change in the normal proportions of the blood, where the albumen is increased and the febrin decreased—that is, albumen 70—normal, to 100 or more, and febrin 3,5 normal to 1,5—the coloring matter and salts remaining, but little changed or altered in their proportions.

Diagnosis of phthisis pulmonalis is not difficult, even in its first stages, by the assistance of auscultation and percussion in addition to the rational signs.

The RATIONAL SIGNS are *shortness of breath*, *contraction of chest*, *nervous or lymphatic temperament*, *general debility*, *frequency of pulse*, heat of skin, cough, expectoration, hœmoptysis. The chronic character of symptoms, lasting for months and even years—scrofula or other tuberculous tumors found in any other part of the body.

PHYSICAL SIGNS.—*Rude respiration*, usually at apex of lungs—most frequently of left lung; dullness on percussion; *mucus ral;* bronchophony; amphoric respiration, and all the usual signs of lobular pneumonia, from which it is most difficult to diagnose of all the other affections of the lungs; but the chronic course of consumption will be sufficient of itself to make the distinction.

The pathological lesions of phthisic pulmonalis are indications of the pulmonary tissues with miliary or gray tubercles, or aggregate or yellow tubercle. The former, as before stated, are white, transparent hard bodies about the size of millet seed, diffused on the bronchial tubes or scattered throughout the lung tissues; the latter several cheesey, waxy, yellow corpustles aggregated together and inclosed in a cyst, filling up the air cells and diminishing the capacity of the lungs to receive atmospheric air. They ulcerate and soften and pour out their contents into the bronchial tubes, and are expectorated or the fluid portions are absorbed and the calcarious matter remains encysted in the subtissue of the lungs. Where these tubercles suppurate they leave cavities or cloaca into which the air rushes producing the omphoric sound, and from which the air is expelled producing the blowing sound; over which spaces the chest contracts making depressions on the external surface, and a contraction of the ribs. The tumors compress the bronchial arteries and veins, hence hæmoptysis and visicular crepitation in the earlier stages. The tumors soften and lay upon the arteries, hence hæmorhages from the lungs in the last stages of the disease.

TREATMENT..

The treatment divides itself into hygienic and medicative. The hygienic is of the greatest importance and should be tantamount to everything else; for if we effect a cure by medication and pay no attention to the sources of disease, it will return. Then we should begin with avoiding all the causes of disease above mentioned, and anything that will exhaust or depress the natural amount of healthy action; should commit no excesses—live in open, pure air—feed on pure, rich and nutritious food—pay attention to any consecutive disease to remove it as soon as possible, especially diseases of the lungs, pneumonia, pleurisy, bronchitis and catarrh; should not suffer the system to be broken down by hard labor, by watching or by darrhœa; should never go from a cold atmosphere to a warm room, or from a warm room to a cold atmosphere; should avoid all drafts of cold or hot air; should take meals at regular hours of pure, rich food, and such as the stomach can digest and does digest. Nothing that produces dyspepsia should be taken; nothing that produces diarrhœa; no venerial excesses should be indulged in; no impure air should be breathed; should not sleep in same bed with a consumptive or where there are supurating sores. Again we say take nothing, do nothing, eat nothing that will debilitate.

The above may be classed as the *negative* hygienic rules, and we will now give the *positive* rules to be followed both to avoid and to assist medication in consumption; rise early, take a morning stimulant of porter, ale, wine or beer, or in tropical districts, coffee, befor leaving your room; dress to suit the season, and usually it is best to have on woolen goods, especially flannel to the skin summer and winter; bathe the whole body once a week in tepid water, washing well; take your breakfast at regular hours, never longer than 9 O. C.; if wearied remain until rested; return to some active labor, walking, riding, or ordinary labor on a farm is the best; jump the rope, exercise on the cross bar, or with dumb bells, especially if confined to room during the day; eat hearty dinners and rest until restored to ordinary strength before returning to usual labor, and work with ease and as patient as possible; go to bed early, and if cannot sleep, should get up and walk about until a little fatigued, and then retire and the patient will sleep.

MEDICAL TREATMENT.

Nearly everything in the materia medica has been tried in consumption, and has at times and under certain circumstances done good as we readily believe, when we return to the many causes which produce the disease. Anything that will cure any of the diseases flesh is heir to, will assist the cure of cases of consumption resulting from the same; but as an impovished state of the bood or a dyscrasia is the first step in the formation of tubercle, then the first thing in importance is that food that will most enrich the blood. Hence gelatinous and aleaginous substances are of the first importance, and secondly, alteratives or eutrophics.

Then the most important of all medicines are the iodides or oleo-iodides. carbon and oleo-carbons of these we have a great variety, both as food and medicine. The most important of all these is COD LIVER OIL and COD-LIVER JELLEY. This, when it agrees with the stomach, is the most reliable of all our remedies. It should be pure, fresh, not rancid—should set well on patient's stomach. If it is vomited, it should be discontinued or lessened in dose. If it purges it should also be changed in dose or discontinted. The pure pale straw colored oil is the best. The dark is generally rancid and taken from the fish rancid or in a state of partial decomposition. It should in all cases be given in some method to suit the patient's taste. Sweetened water, brandy, vinegar, (being a solvent of tubercle). It is not well borne in the summer nor in warm climates. Hence here in the South it usually purges and depresses our patients instead of doing them good.

When cod liver oil disagrees, we may resort to the iodide of potash. I give the following:

Potassæ iodidi, vi drachms.
Syrupi Stillginia, i qrt.

S—Take teaspoonful three times a day and increase dose as much as stomach will bear. Or I give the following when there is fever and hæmoptysis, and this I have found to do more good than anything I have ever used. I believe it to be especially adapted to our climate:

R Olei Terebinthnal, i drachm.
Muscilagi Arabicæ, iv oz.
Sacchari Albœ, ii drch.

S—Tablespooful three times a day. This may be taken for a long time, and I often add two grains of morphine to the above mixture if there is diarrhœa, or much cough and expectoration. I always avoid opiates or emetics in the first stages, and emetics at all times seem to do more harm than good. Morphine may be given in large doses in the last stages, when

I have found the following the most effectural of all prescription in allaying cough and producing sleep:

Syrupi Limonis, i pt.
Acidi Hydrocyani Diluti, x qrt.
Morphine, Sulphate, x grs.

For diarrhœa in last stages I give

Bismuthi sub-nitrates xxx grs.
Opii. pulveris xii. grs.
Argenti nitratis vii. grs.
F. pills, No. 12.

S—One as often as necessary.

I also use iodide of mercury over the abdomen, applied on oil silk once a week with flannel roller and oil silk all the time.

Small blisters to chest over seat of pain. Renewed as often as necessary, but never allowed to suppurate if possible, preferring to renew them every two or three days over another surface.

I allow my patient to eat freely of honey, sausages, milk, eggs. Drink—egg-nog, regular when the cough is not tight.

Elder Berry wine is very fine, being food and medicine—an active alterative with a diffusible carbonatious stimulant. I cannot leave this subject until referring again to turpentine emulsion, for I have found in it most decidedly good effects. Being induced to give it a thorough trial from its known good effects in typhoid fever and pulmonary hæmorhag. The old tar pill was of the same effect; and, as it has the power to restore the febrin to the blood in typhoid fever, so I believe it acts in tuberculosis in restoring the blood to its normal standard; and, in this connection, I will further state I have used tincture of cantharides and gallic acid, equal parts, for the same purpose, believing the cantharides will, by its action on the tissues, produce an increase of febrin, and by it diurettic effects to remove the serum in the last stages. The gallic acid restrains the discharges from the bowels, and, to some extent, controlling the expectoration. I also have used with benefit the following:—

Potassæ nitratis i. drach.
Tinc. cinchonæ
" guiacci aa. ii. ounces.

S—Tablespoonful three times a day.

The syrup of iodide of iron I have not received any benefit from, nor, I may say, from any preparation of iron except the ferro cyanide. This given in half-grain doses in a tablespoonful of simple syrup, or lemon syrup, I think has done good. Most of the preparations of iron producing fullness of head and heaviness at the stomach.

I have not sufficienly tried the phospates of soda and potassa, according to Churchill's prescription, but so far as I have tried them, they do no good.

I have seen many cases cured by the above treatment that had had severe attacks of Hœmoptysis, and even with cloaccæ in portions of the lungs.

I have no means of ascertaining what portion of our population are subject to tuberculosis, but think there are less in Texas than any place I ever lived at, notwithstanding our sudden and extreme changes of temperature. Many persons coming from the interior to Galveston take hœmorrhagies of the lungs; but most are cured and look well ever afterwards. Many cases I saw while in the army at this post that I now know to be healthy, stout men. I believe many persons have tubercles in their lungs and are entirely unconscious of them until a change of climate or taking of cold produces ulceration and absorption, and with it 'fever, which, but for change of climate or taking of cold, would have lived and died without knowing they ever were subject to tubercles.

Since the introduction of the thermometer in the diagnosis of diseases, we have found that in all cases where there are tubercles in the lungs the thermometer will remain from three (3) to five (5) degrees above healthy temperature; that is, the thermometer placed under the the axilar or under the tongue will rise to 103° or 108° Far., and never fall below 100° —99° being considered natural. In doubtful cases this is a great assistance, and during the cure it will indicate as plainly as auscultation the progress we are making.

The sprygmograph is also being used in showing not only the number of beats of the pulse, but the strength and force of the pulse—there being a difference in cases of chronic bronchitis and consumption indicated both by the thermometer and sprygmograph.

Tuberculosis.

AN ABSTRACT FROM VIRCHOW'S KRANKHAFTEN GESCHWULSTE.

BY FRANCIS DELAFIELD, M.D., NEW YORK.

One of the greatest of living pathologists has definitely formulated his views concerning that most difficult subject—tuberculosis. No English translation of his work has yet appeared. This short sketch of his treatise may be of interest.

The lymphatic glands consist of cells, the so-called lymph cells, contained in a fine reticulum of connective tissue, and arranged in follicles divided by fibrous sheaths. These follicles may form large masses, as in thymus, the tonsils, and in Peyer's patches; or they may exist singly, as in the solitary intestinal glands, and the malpighian bodies of the spleen. The essential element is, in all cases, the cells.

There are two groups of tumors analogous in structure to these lymphatic glands. First, hyperplastic growths of already existing glands; second, heteroplastic growths of the elements of glands, where none such normally exist. To the second of these groups belong tubercles. There are two words which have been so loosely used in connection with tubercles, namely, scrofula and struma, that it is necessary, at the outset, to define them.

Scrofula is the literal Latin translation of the Greek chœras, which is found in Hippocrates. Both expressions signify a young pig (scrofa). The older writers desive the name from the fact that the swellings are as numerous as a sow's young; or that swine suffer from this disease; or that swine have necks containing many glands; or that an affected neck assumes the shape of a swine's. The Latin word, however, was little used by the ancients, and the expression "scrofula" has only been generally used since the time of Cullen and Hufeland.

The word struma is found in translations of Greek authors, and in Celsus, as a parallel expression to scrofula, often with exactly the same meaning. This original use of the two words as synonyms has been reproduced by modern English writers, who express by "strumous" what continental writers call "scrofulous," or "tuberculous." French writers use the work struma very little. German authors, on the other hand, express by struma, tumors connected with the thyroid gland, and, by scrofula, tumors connected with the lymphatic glands. This use of the words will be here retained. Scrofula, however, is here used to express not a mere swelling of the lymphatic glands, but a peculiar condition of the constitution, which causes the lymphatic glands to be unusually vulnerable to any irritating cause, and indisposed to healthy reparative action. This condition can be explained in part by an unusually rich development of the lymphatic organization, in part by a weakness of particular parts or regions. This weakness is caused by a certain imperfection in the organization of the glands. Such a constitution may be hereditary, or may be produced by insufficient and bad nourishment, foul air, etc.

The word tubercle had originally nothing to do with any special process, but merely expressed the shape of some particular local growth, or was even used as a synonym for processes of the bones. So it was applied to tumors of the most diverse natures, syphilitic, cancerous, bony and fibrous, as a simple descriptive term. The word first began to be used in its modern sense at the end of the last and the beginning of the present century, at the time when more accurate anatomical investigations of lung diseases, especially by Baillie and Bayle, were undertaken.

Careful post mortem examinations of morbid lungs revealed a variety of conditions, which were called by various names—tubercula, struma, scirrhoma, steatomata. Two forms of phthisis were distinguished, one resulting from pneumonia and catarrh, the other from tubercles. The tubercles were considered to be diseased glands. Attention was called to the many points of resemblance between tubercles of the lungs and scrofulous glands, and hence was evolved the doctrine of the identity of scrofula and tuberculosis, a doctrine held by Von Swieten, Morgagni, Cullen, Portal, and Hufeland.

The exclusive examinations of the lungs, however, and the regarding them as a standard of tuberculosis, led to confusion. Laennec, especially investigating as a specialist, and considering phthisis as a unity, confounded together a number of totally different conditions, and his great authority has influenced nearly all subsequent investigations. His followers held the cheesy material as the diagnostic sign of tubercles. Even those who, like Lebert, declared against the identity of scrofula and tubercles, considered the cheesy condition of a gland as a diagnostic sign of a tuberculous process. This cheesy material has been the source of numberless errors. It must be borne in mind that it is no specific material, but is simply dead tissue, and may be the last stage of various morbid processes. Any reasonings which regard this dead material as the essential part of tubercles must end in error. Thus, Broussais and Cruveilhier considered tubercles as the result of an inflammatory process, and originated the doctrine of tuberculous inflammation. It is absolutely necessary to hold fast the non-identity of the original processes, and to overlook the identity of the metamorphosis which the tissues can undergo. Then it becomes possible to make the essential distinction that tuberculosis, in opposition to scrofula, is the production of heteroplastic, lymphoid new growths in regions where they do not belong.

The true tubercle has no essential connection with inflammation. Whether its growth is, or is not, attended by inflammatory processes, its character remains the same. It is, however, undoubtedly of an irritative nature, and it is even right to speak of a tuberculous inflammation.

Though tubercles are to be considered as distinct from scrofula, it is necessary to admit their near relationship. Tuberculosis may even be regarded as a heteroplastic scrofula, for the frequent occurrence of both conditions in the same person is otherwise difficult to explain.

There have been various views in regard to the relation between tubercles and the products of inflammation. First, that tubercles are the irritating cause which produce the inflammation. Second, that both tubercles and inflammatory products are formed from a simultaneous exudation. Third, that tubercles are produced from the inflammatory products. The first and last of these views are founded on fact, and can be proved by observation. The second view, that of a tuberculous exudation, was originated by Magendie, and supported by Rokitansky and the Vienna school. *They held that the specific material was exuded from a morbid blood, and cited the existence of the well known cheesy material in the alveoli of lungs as proof.* The result of their reasoning and mode of investigation was that the real tubercles of the lung were overlooked. And, under the name of gray granulations, in the lung and arachnoid membrane, they have been described by Robin as something new and distinct.

It is in the lungs that the cheesy material has caused the greatest confusion of ideas. After a chronic pneumonia or bronchitis, the alveoli and small bronchi are left filled with the products of inflammation. These thicken, degenerate, and become cheesy; there results what has, since Laennec, been called "tubercular infiltration," but is really a cheesy hepatization. This cheesy material may be found in miliary form, in circumscribed deposits, or involving entire lobes. True tubercles of the lungs arise always in the walls of the air passages, and are not secreted in their cavities.

To avoid confusion, it must be remembered that tubercles exist in various stages of growth and decay, and vary somewhat in different organs. A description, therefore, true of one stage, may be quite false of the others.

The true tubercle is organized, if not vascular; that is, it is composed of living cells. It arises from connective tissue, bone, fat or marrow. It is, therefore, best studied in those parts which are composed of the simplest tissues, such as serous and false membranes; next, in glands with a well defined stroma, as the liver and kidney; with the greatest difficulty in organs, like the lung and brain, of a complex structure.

The young growth looks at first like fresh granulation tissue; it contains very soft, fragile cells and nuclei. These cells are the true tubercle corpuscle, which is not a mere nucleus nor a solid body. They resemble essentially the lymphatic gland cells, are round, and vary in size from a little smaller to three-fold that of a white blood corpuscle. The cell body is colorless, transparent, a little granular, and easily broken by pressure or the addition of water and reagents. The nuclei are small, homogeneous, shining, contain nucleoli, and number from one to twelve in a cell. Between these cells is a small, net-like arrangement of connective tissue fibres, and sometimes vessels. The latter are usually not new, but belong to the old vessels of the part.

Lebert's tubercle corpuscle is no original element, but a production formed from cheesy metamorphosis. It can be found not only in dead tubercles, but in pus, scrofulous glands, cheesy hepatization, and carcinoma, after they have undergone the cheesy transformation. It has, therefore, no diagnostic worth whatever.

The young tubercle is a true neoplasm—arises not from an exudation, but from proliferation of existing tissues, or from newly formed connective tissues.

The cellular arrangement of tubercles is repeated in all parts where they reach their acme. But in many regions the acme is never reached, especially in firm, fibrous tissues, and newly formed connective tissues. Here a large part of the tubercular tumor consists of thick connective tissue, whose cells are numerous and contain several nuclei, while only in the centre is a riper growth found. When such a tumor becomes older nothing will be found but a fatty, granular centre and a shell of connective tissue—no cells.

After the first development of tubercles their regular course is to the cheesy transformation, but fatty degeneration, with or without resolution, may also take place. . This cheesy transformation begins at the oldest part of the deposit, generally the centre. After the cheesy stage comes that of softening, which also first attacks the oldest portion. In tubercles growing on surfaces, however, the oldest portion is the middle of the surface, and not that of the entire growth. Those who suppose softening begins at the periphery have only observed conglomerate masses, or non-tubercular cheesy deposits. The softening is not the result of the tubercular mass causing inflammation and suppuration of the surrounding tissues. It is a purely chemical process, unconnected with suppuration. The debris of tissue, which form the cheesy mass, separate into smaller and smaller elements, and may even change to a fluid form.

If the softened tubercles are near the surface, as in mucous membranes. there follows ulceration. This takes place through the simple separation of the softened mass, without any suppuration. But as the softening is usually only partial, the bottom and walls of the ulcer are still formed of cheesy material, which gradually also softens and separates, until there is left an ulcer no longer tuberculous, though caused by tubercles. Not until it has thus become a simple ulcer does it secrete pus. These ulcers can be best studied in the bladder. After the separation of the tuberculous matter the ulcer may cicatrize, but this is seldom the case. More often new growths form around and under the ulcer, and the morbid process is constantly beginning afresh. The so-called infiltration is formed when a number of deposits are situated near each other. Through their confluence is formed a continuous, homogeneous, cheesy conglomerate. In mucous and serous membranes, through such a confluence of miliary tubercles results a thick, yellowish white, dry layer, which covers the entire surface, like a diptheritic membrane. If this takes place in the walls of a tube like the bronchi or ureters, it may even obliterate their canals; and if the mass afterward softens, it will appear like an exudation in the cavity of the tubes.

Large tubercular masses are best studied in the brain and spinal cord. There it can be seen that the mass is formed of lamellæ, and that the growth takes place by the apposition of new gray tubercles, and not of cheesy material.

In the lymphatic glands there exists a tubercular growth arising from their connective tissue. The glands usually inflame and hypertrophy at the same time. The growth begins as small, grayish spots, in greater or less number, but does not always affect the entire gland. The gland tissue proper becomes soft, reddish gray, and succulent. The gray spots become larger, firmer, harder—and, finally, cheesy. Afterwards the mass may soften. Tuberculosis of the glands is nearly always secondary to that of neighboring organs.

The spleen is one of the favorite seats of tuberculosis. On the other hand the tonsils, the salivary glands, the pancreas, the muscular system, excepting the heart, the thyroid gland, the mammary glands, and the ovaries, show an unaccountable indisposition to take on this process.

The testicles are strongly predisposed to tubercle. The existence of syphilitic growths and of chronic inflammatory processes render their diagnosis obscure. The anatomical diagnosis of the inflammatory process is not difficult. The gummy tumors are to be distinguished by their situation in the body of the testicle near to the tunica albuginea, while tubercles usually begin in the epididymis. The tubercles always arise from the connective tissue, and never from the epithelium.

In bones, tuberculosis usually arises from the marrow, especially in the spongy bones. The vertebræ and the ends of the long bones are its favorite seat. The process usually takes the form of an osteomyelitis tuberculosa, though in young children a simple formation of tubercles occurs. The yellow marrow first becomes red, then are formed small, grayish granulations, at first scattered, later grouped together. The surrounding marrow is hyperæmic. Later, these granulations become cheesy, run together, and there result opaque, yellow masses, which contain the detritus of the surrounding tissues. These partly cellular, partly dead masses fill the medullary cavities. At the same time the bones thicken. After a certain time the bone tissue itself is affected, and this may take place in two ways. First the bone tissue changes into soft granulation tissue, in which miliary tubercles grow; or, secondly, the bone surrounding the cheesy masses necroses, especially in the spongy bones. There results a form of caries. Around such dead portions of bone arises a secondary inflammation and suppuration; hence are formed abscesses, which seek the surface by fistulous openings.

In Pott's disease of the spine, the cause may be either such a tubercular process, or more often a true inflammation and suppuration of the bone—osteomyelitis scrofulosa.

If we now consider tuberculosis as a whole, we will notice two characteristics: its heteroplastic formation, and its inclination to multiple eruptions. Both these qualities seem to imply a dyscrasic cause, and the doctrine of a tubercular dyscrasia, or diathesis, has been widely taught and believed. Hence, also, arose the question as to the exclusion and combination of tubercles with other diseases. It may be safely asserted that there is no exclusion of tubercle against other diseases, only against certain organs and tissues. But it never forms part of a mixed tumor. This question loses its interest when tubercle is considered, not as an exudation, but as a new growth.

But now we must ask, whence and how does this growth arise?

It can be definitely stated that connective tissue and its allies are always the matrix. The attempts at determining the cause of a new growth by experiments on animals have proved very unsatisfactory. It is doubtful if true tubercles even exist in them. No one has yet succeeded in forming tubercles by experiment.

There is certainly a local vulnerability and a local immunity of organs. In general, organs normally containing lympathic elements are those most predisposed to the disease, but there are exceptions which cannot be explained. Also there is a vulnerability and immunity of individuals.

Tubercles are a disease of extra-uterine life; they are hereditary, but not congenital—hereditary not as a disease, but as a disposition. It is probable that not only tubercles, but also syphilis, scrofula and other diseases ot parents may cause a predisposition in their children.

The tissues are the carriers of this predisposition, and the younger they are so much more easily is their disposition excited. A disposition to tuberculosis indicates always a disposition to inflammation. Childhood and youth are especiall prone to the disease. The fact that in the same family one child is attacked by tubercular arachnitis, another by tubercular osteomyelitis, a third by tubercular laryngitis, does not prove the existence of a dyscrasia, which breaks out now in one organ, now in another. It rather shows that different exciting causes affect different regions, all having the same predisposition. The predisposition is not only hereditary, but is produced by all causes which debilitate the general system.

Tubercle resembles malignant growths, in that it infects neighboring tissues. Thus, in mucous membranes and in other organs, the original growth causes the formation of new growths in its neighborhood. There is also found a secondary tuberculosis of the glands, as in the mesenteric glands after intestinal tuberculosis, and in the bronchial glands after tubercular bronchitis. Metastases in distinct organs, also, are produced.

The contagiousness of tubercles or their inoculability has not yet been demonstrated.

It seems probable that tubercles may be at times epidemic. It may be that, as with plants, so with tumors, certain seasons of the year produce an increased growth. These questions require further study.

The indications of treatment are: When possible, extirpate the tuberculous mass early, as in the testicle, the glands, the bones, and joints. When this is not possible, we must, first, fight against the predisposition by every means which will improve the general health; and, secondly, carefully avoid all irritating causes, for a slight catarrh or inflammation of no moment in a healthy constitution, in one disposed to tubercles brings a new growth in its train.

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Necrology.

Died, at Galveston, of cholera, on the 8th day of Dec., 1866, Dr. Samuel Randall. He was born in Shelby county, Ala., Nov. 11th, 1824, and was a private student under Prof. Mott for two years, and graduated in the Medical Department of the University of New York in the spring of 1846. He moved to Texas in April, 1851; practiced for two or three years in Rusk, Cherokee county; moved to Huntsville, Walker county, in the fall of 1854, where he lived until Jan., 1865, when he moved to Galveston. He was appointed surgeon of Ellmore's regiment in the spring of 1862, which position he was compelled to resign on account of ill health in the fall of 1863.

Examination of the Calabar Bean.

BY SAMUEL P. DUFFIELD, PH. D.; DETROIT.

Two pounds avoirdupois were finely powdered and separated from the shells; this powder was mixed with one gallon distilled water, acidulated with one ounce of strong acetic acid (No. 8); it was then heated by steam to the point of ebulition, and held there for one hour. The mass was then of a slimy consistency, owing to the large amount of starch the beans contained. It was transferred to a percolator, and diluted alcohol poured upon it until it ceased to extract any matter. The menstrum which had passed through was evaporated, and the extract treated with pure concentrated or absolute alcohol, which became rapidly discolored, and which yielded an amorphous resinous mass on evaporation on microscope glass slips. The excess of the alcohol was driven off with gentle waterbath heat, and the acid, if any, neutralized with bicarb. soda and shaken with ether. The ether decanted, and allowed to evaporate spontaneously, left a resinous mass of amorphous. seeming like oily drops, and very much resembling nicotine, which, after full evaporation, could not be again repeated in that form, but assumed the form of resin.

The etherized solution left but a small amount of amorphous resinous mass, the greater portion of the active ingredient being more soluble in alcohol than in pure concentrated ether.

It is a question with me whether this should be called an alkaloid. I am now under the impression that there is a volatile alkaloid associated with a resin, and that by far the greater, if not all, the terribly poisonous properties are due to the *resin*. If we take into consideration its behavior, we find that it is somewhat puzzling either with the alkaloids or resinoids. In order to define my position more clearly, allow me to give the definition of alkaloid, as received from different authorities.

Almost all agree that an alkaloid has *basic* properties, and is in general, with the exception of some of the volatile alkaloids, crystalizable. Hartung Schwartzkoff, in his treatise on the organische alkaloid, takes the ground that the per cent. of ammonia in composition should be one of the general ideas in connection with its basic reaction and behavior to solutions of tannin, chloride of gold and platinum. This extract behaves quite differently. Treated with ether, it *does not* give any crystalizable substance, but a resin; treated with acids, it dissolves, but *does not* give crystalizable salts; animal charcoal precipitates, or rather abstracts it; its aqueous solution reacts alkaline. It gives precipitates with tannic acid, or tinct. of galls. of a fawn color; a pale yellow precipitate with chloride of platinum solution; with chloride of gold solution, a violet, owing to the reduction of the chloride of gold. Corrosive sublimate gives a dirty white; fused with potassa caustica, it gave ammoniacal fumes, and with bin iodide of potassium it gave a brownish precipitate. One pound of beans will yield about one drachm of extract. The best menstrum is strong alcohol, and its behavior makes me think it should be classed, as regards treatment, with Indian hemp, using boiling alcohol to extract it.—*Detroit Review.*

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On the Treatment of Wounds and Ulcers by Currents of Air. By Dr. Berenger-Feraud.—This method was proposed by Bouisson, of Montpellier, in 1861. Five cases are reported by Dr. Berenger-Feraud, where it was successfully used. It is recommended to apply first one or two alcohol dressings, to diminish the hypersecretion of leucocytes. A common parlor bellows is the instrument employed. Each sitting varies from five to twenty minutes, until the surface is covered with a thin pellice, shining and slightly wrinkled at the periphery, and sufficiently thick and dry to bear the application of a piece of silk paper without its sticking. Ventilation should be repeated within three or four hours after the first application.

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Regeneration of the Spleen.—It is generally believed that extirpation of the spleen is followed only by the enlargement of the neighboring lymphatic glands; but the enquiries of M. Philippeaux show that this opinion needs modification. A number of experiments on guinea-pigs have convinced this physiologist that unless the organ be completely removed it becomes regenerated. The secondary spleen differs somewhat in size and general appearance from the true gland; but a microscopic examination of its structure shows that it possesses all the normal anatomical features. It may, therefore, be concluded that when the spleen is completely removed, it is never redeveloped, but that if a portion of the structure be left behind, regeneration ensues.—*Lancet.*

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Contractile Cells of Syphilitic Pustules. It has been pointed out by Herr Szabadfoldy that the cells removed from syphilitic pustules exhibit peculiar movements like those of the amœba and other protoza. In many cases the projected processes become so numerous that the cell has the appearance of being clothed with cilia. Round cells frequently became oval, and underwent many other changes of form. In some, an internal molecular movement was distinctly seen.—*Lancet.*

Reduction of Inverted Uteri by a New Method.

The following case was presented at a meeting of the New York Obstetrical Society, November 21, 1865, and published in the American Journal of the Medical Sciences, Philadelphia, for January, 1866. It has, however, been to a great extent re-written, as well as the subsequent case, and additional material added:

Mrs. Q., aged 24, came under my charge Oct. 8, and presented the following history:—She had menstruated for the first time at eleven years of age, with no return for a year, but after this period she became regular and continued in .perfect health. She was married at 22 years of age; soon afterwards became pregnant and went to full term. Labor commenced between the hours of nine and ten P.M., March 11, 1865. She was attended by a homœopathic practitioner, who was called in attendance at once and remained all night. The progress of the labor, it seems, was perfectly natural. About eleven A.M., the attendant ruptured the membranes, and delivery took place of a large male an hour afterwards, labor having continued nearly thirteen hours. As the head passed the vulvæ it was discovered that the umbilical cord had made several turns around the child's neck; the cord, as stated, was slipped over the head without traction, the body followed immediately, and soon afterwards the placenta. Within an hour after delivery the patient suddenly became faint, with violent after-pains coming on. This condition continued for some forty-eight hours, with a bloody discharge, which, at the time of a pain, was expelled from the vagina with considerable force. After the pains had ceased, the flow continued more than natural, and at times was almost pure blood. About a week after delivery the nurse discovered a mass presenting just within the vagina. An examination was made by the attendant, a consultation called, and the case pronounced (as the patient states) one of cauliflower growth. She returned home to her friends, in Utica, at the end of the month, still suffering from a constant sanguineous discharge. Her general health at length became so much impaired that Dr. McCall, of Utica, was consulted, and he recommended her to my care.

She presented every indication of suffering from extreme anæmia, with a pulse of 140, and a loud cardiac murmur following any exertion. On making a vaginal examination, a soft mass, somewhat larger than an egg, was felt lying in the axis of the vagina, and, being pedunculated, might well have been mistaken for a polypus. I passed two fingers of the left hand well up into the cul-de-sac, behind the mass, so as to lift the uterus above the pubes, and, with the other hand over the abdomen, I was able to approximate the two sufficiently to satisfy myself that the case was one of inversion of the uterus.

Oct. 9th.—Dr. Thomas saw the case in consultation, and verified my diagnosis. It was then decided that nothing could be gained by further delay.

10th.—With a pulse of 160 per minute, at 12:30 P.M., she was placed under the influence of ether, by my assistant, Dr. Perry. As it was a serious question if, in her reduced condition, the anæthetic could be continued long enough to effect the reduction, I requested Drs. Thomas, Sabine, and George T. Elliott, Jr., to aid me with their counsel. After a few moments she was fully under the influence of the anæsthetic; the pulse became fuller and reduced in frequency. The patient, lying on the table, of a convenient height for me to operate while seated, was placed on the back, with her knees drawn up. The left hand was passed entirely within the vagina, and by pressure of the fingers the fundus was dimpled, while the organ was steadied by the right hand over the abdomen. At the end of an hour I found that but little progress had been made beyond the fact that the fundus was somewhat smaller, in consequence of the impared circulation from pressure. As there was full time for reflection, it became evident to me that the mode of reduction recommended by pressure made at the fundus was not applicable when the uterus had already contracted to nearly its natural size. As the fundus was indented by pressure, the body spread laterally beyond the cervix, and, although it materially dilated the neck by flattening it, the power was lost, without influencing to any extent the point of constriction. In fact, it seemed to increase the difficulty with a continued force in the upward direction, by rolling in the parts at the point of inversion. With this view, I allowed the fundus to drop into the palm of my hand, and passing the thumb and fingers around the mass as high up as possible within the cervix, I continued to enlarge the space between the neck and inverted body, by rapidly expanding the fingers as much as possible. At the same time I made steady upward pressure, with a view of returning first the portion last involved. This manœuvre was aided by lifting the organ above the pubes, and endeavoring with the other hand to roll out the inverted portion by sliding the abdominal wall over the point with some pressure. In the course of half an hour, the progress of the reduction was marked. The globular mass, which was felt through the abdominal parietes in the beginning, now gradually became oval laterally, with a marked depression in the centre. By this time my hand had become almost powerless, and I was obliged to call on Dr. Elliott to relieve me for a few moments. I then continued the manipulation for some three-quarters of an hour longer, when Dr. Thomas, who had been absent during the past hour, returned. From his appreciation of the progress made, the only fear I entertained of final success was in the patient's power of endurance. Gradually the fundus passed entirely within the cervix, but beyond this point, for an hour longer, but little advance was made in the reduction. The depression, however, felt through the abdominal walls, above the seat of inversion, had become large enough apparently to admit the extremities of three fingers, with a proportionate increase in the size of the mass. During the whole time the patient had been kept profoundly etherized by Dr. Perry. This was found necessary from the fact that in the beginning, when its influence was lessened to any degree, vomiting came on immediately, and with any movement of the patient it was impossible to steady the uterus or maintain the necessary amount of pressure. Her pulse had continued good throughout, and her general appearance was satisfactory. Shortly before four o'clock she began to fail; at about ten minutes after that hour her condition had become critical, and I was obliged to abandon my efforts for the time being, in consequence of the powerless condition of my hands. In consultation, the opinion was unanimous that it would jeopardize the life of the patient to continue the etherization longer. In this opinion, Dr. Echeverria, who was present, concurred. At my request a last effort was made, for I was satisfied that I could not be deceived in the fact that the depression, felt through the abdomen, was slowly becoming larger. Drs. Sabine and Elliot, after a few moments, desisted from their efforts, as the latter gentleman had advised a frequent change, so that the hand of each operator having rested, the power exerted would be maintained in a more uniform manner. Dr. Thomas, in turn, also passed his hand into the vagina, and, as he describes it, drew down the mass so as to reproduce the inversion, and on immediately returning it, found that it did so beyond its previous position; he repeated this manœuvre, and on returning it again, on the point of his finger (without force on his part, as he stated), the fundus passed on and the reduction was completed, after an effort of three hours and fifty-five minutes.

This point is one of great clinical interest, and worthy of discussion by the Society, as to the bearing of this manœuvre on the result, as well as the exact point at which it should be resorted to. My own impression is, that Dr. Thomas is mistaken as to the extent of reduction made by him. The portion below the constriction was flaccid and could be readily drawn down, but above the engaging point, where the surfaces were forced into such close proximity, it is a question whether more force would not have been required to reproduce the condition existing at the beginning, than it was possible to have exerted. The final effort, doubtless, hastened the issue, yet as the widest portion of the uterus was already so far advanced within the canal, it is possible that the muscular action of the organ itself might at this stage have soon completed the reduction, as, from the result, the canal was evidently already dilated sufficiently for the purpose. We see the principle demonstrated in an India-rubber ball which has been indented; as soon as the action of recovery has once commenced, the progress of restitution rapidly increases to the consummation.

She speedily recovered her consciousness after the ether, and during the vomiting following, as a precaution, I passed the index-finger directly into the relaxed canal of the uterus, which was presenting immediately within the labiæ. It was fortunate that I did so, for on the instant I felt a portion of the posterior wall near the fundus indented. With the other hand on the abdomen, I seized the organ and restored the portion on the point of my finger, and retained it in the canal until the paroxysm had passed. It was the only effort at vomiting, and there was no return.

At 5 P.M., with a pulse of 130, twenty-five drops of Magendie's solution of morphia was administered with beef-tea by the mouth. At 9 P.M., pulse 128, as she was suffering from pain generally over the abdomen, thirty drops of Magendie's solution was repeated. She was sleeping quietly at 10:30 P.M.; pulse 112 per minute. At midnight the pulse was 108, and she had been sleeping since the last visit.

11th.—At 9 A.M., the pulse was 110; she was free from pain, and had passed a quiet night. As there was some tenderness on pressure over the abdomen, a large poultice was ordered. At noon her condition was comfortable; pulse 120, with some increase of tenderness over the abdomen; ordered the morphia to be repeated. Half-past 2 P.M., was free from pain, and sleeping quietly; pulse 105. At 7 o'clock P.M., pulse the same; repeated the morphia.

12th.—Nine A.M., pulse 100; she was entirely free from pain, and had passed a very comfortable night. From this time she was kept quiet in bed for twelve days without any further treatment being necessary.

16th.—I made a digital examination and found the os patulous, but the uterine canal contracted above the vaginal junction so as to admit the point of the index-finger only for a short distance. The sound passed a little over three inches readily to the fundus, with the organ somewhat anteverted.

Nov. 28th.—She visited me after taking a long drive. I found that the uterus had returned nearly to its normal size. She had menstruated naturally a few days before, and was rapidly regaining her health and flesh.[*]

On presenting the case to the Obstetrical Society, it was the opinion of several members that the condition of the patient at the point in question favored a rapid reduction in the last stage, and as the dilatation was complete, the innate force of the organ itself might have soon completed the reduction. Dr. Budd remarked that Dr. Noeggerath had some years ago succeeded in reducing an inverted uterus by a similar process, and that the case was published in the "Transactions of the Academy of Medicine."[†] Dr. Noeggerath being called on, related the case in full, and remarked that in recent cases, and where the fundus had not yet escaped from the cervix, the dimpling process recommended would sometimes succeed, but not always where the inversion was complete. He also gave the particulars of a subsequent case where he succeeded only by confining his manipulations entirely to the return of one side alone, until the reduction was complete.

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CASE II.—REDUCTION OF AN INVERTED UTERUS OF EIGHT MONTHS' STANDING, BY THE SAME METHOD.

(Read before the New York Obstetrical Society, March 6th, 1866, and published in the American Journal of the Medical Sciences for April, 1866.)

Dr. Gouley, on the 17th of February last, requested Dr. Noeggerath and myself to see a case of inverted uterus under his charge in St. Vincent's Hospital, in this city. With his permission I have reported the case, from the fact that the reduction was effected by the method proposed by myself, as described in the preceding case. The patient was about twenty-four years of age. In June last, at full term, and in perfect health, she was delivered of her second child by a very rapid labor, in which she had but one severe expulsive pain, just as the head was expelled. Until within a few moments previous to delivery, she had not found it necessary to lie down. The after-pains came on at once; they were severe, and lasted longer than had been the case after the birth of her previous child. From a short time after delivery until the reduction, there had been a constant show, which frequently amounted to a hemorrhage, and she presented the appearance of one who had been suffering from an excessive loss of blood. Her condition had been attributed to the existence of a polypus, which was supposed to be protruding from the os uteri, and she had been sent to the hospital for the purpose of its removal.

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[*] Nov. 2d, 1866.—Her husband called upon me to state that she was in excellent health, and now five months advanced in pregnancy.

[†] This paper was read before the Academy of Medicine, March 5, 1862, and published in the Medical Times, New York, April 26, 1862. Since reporting the case I have read the article for the first time, and with great interest. But the method employed by myself was entirely different. I grasped the circumference of the mass as near the seat of inversion as possible, and, by upward pressure, the extremities of my fingers acted as a wedge laterally to roll out first the portion last inverted. And, in addition, the manœuvre was facilitated in a great degree by the action of the other hand over the abdomen.

Dr. Noeggerath's case was of thirteen years' standing. He first resorted to the method proposed by Professor White, of Buffalo, but without success, and states in his paper as follows:—"Almost discouraged by these fruitless efforts, and feeling that the strength of my right arm was nearly exhausted, I was about to desist from any further attempts, when the idea struck me to proceed on a different plan of manipulation. I at once changed the position of my hand in such a manner that the fore and middle fingers grasped the right section of the tumor; while the thumb was implanted on the left side at a point where the upper two-thirds of its length met the lower one. In this manner a pressure was exerted by the thumb on the lateral border of the body of the womb, which pressure took an upward as well as a lateral direction, and resulted in the formation of an oblong groove, the long diameter of which pointed below towards the left horn of the uterine fundus, and upwards to the spot where the inverted and the non-inverted portion met on the left side. The object of this first step of the operation was to completely double up the uterine cavity, so that the right—now inner—wall touched the left one. After this was completed, the dimpled portion was carried upwards by the thumb, and in doing so it could be observed that the right side of the upper section of the inverted cervix passed first of all through and beyond the os uteri. During the progress of this manipulation, the right lower section of the uterine body followed, and re-assumed its normal position, while the opposite part of the fundus continued to remain outside the os, only much shortened, and doubled up. As soon, however, as half of the tumor had disappeared inside the abdominal cavity, the intra-vaginal section slipped suddenly out of my fingers, and the operation was completed." Dr. Sims, in his late work on Uterine Surgery, reports a case of twelve months' standing, which he reduced by a method similar to that used by Dr. Noeggerath.

After much difficulty, the patient was gotten under the influence of ether by Dr. Ward, the house surgeon, at half-past two o'clock P.M. An examination was then made by one hand in the vagina, lifting the uterus above the pubes, and the other hand on the abdominal parietes; the two were thus so closely approximated as to leave no doubt in regard to the true condition.

Dr. Gouley, as well as Drs. Wm. H. Van Buren and Samuel D. Moses, who were present, concurred in the opinion of Dr. Noeggerath and myself. At my request, Dr. Noeggerath, after Dr. Gouley, attempted the reduction by his method of depressing one side into the canal and carrying this portion up first, as described in the note appended to the preceding case. After an attempt of some fifteen minutes, he found it impossible to indent the body sufficiently, and desisted. I passed my hand into the vagina, and for a while, endeavored to put his method into practice, but found it impossible to do so to any extent. In fact, the organ was so dense, and contracted to so nearly its natural size, that the case was not a fair one for testing his mode, nor one which could have been reduced by pressure at the fundus, as proposed by Professor White, while it was in every respect favorable to the method I resorted to. With the left hand in the vagina, the four fingers were passed as far up as possible between the inverted portion and the neck, with the thumb in front, so that the body was encircled by the fingers, and the fundus rested in the palm. Then, with an upward and outward pressure at the same time, the neck was gradually dilated until the seat of inversion was reached by the frequent extension of the fingers. This manœuvre was persevered in, while during the whole time the organ had been lifted above the pubes, so that the other hand could assist in the rolling out of the parts by sliding the abdominal walls upwards, with a steady pressure over the posterior portion of the ring formed by the inversion. In less than half an hour the mass, as felt through the abdominal parietes, had doubled in size, the depression in the centre had become larger, and the shape had changed from a circle to an oval. The fundus gradually passed entirely within the cervix, but, after this, the progress, as appreciated from the fingers within the uterus, was almost imperceptible, though the rapidly increased size of the mass and diameter of the depression at the seat of inversion was recognized by all present. At the end of an hour, my hand in the vagina became so powerless, that without the aid of the hand over the abdomen, I was unable to feel the body of the uterus within its grasp. I finally requested Dr. Noeggerath to relieve me, and, by his continued manipulation, in about ten minutes the reduction was completed, after a conjoined effort of an hour and twenty minutes. The patient has continued to do well up to the present time, and has not had a bad symptom.

Much time was lost in each case by the different methods at first resorted to. In the first one, the principle of the force exercised by expanding the fingers was not fully appreciated, beyond the facility given in reaching the seat of inversion with the object of returning first the portion last inverted. The cervix and the portion of the body not involved embraces in close contact the inverted portion within its course. By a glance, it will be apparent that these surfaces cannot be separated to any extent without rolling out the portion immediately at the seat of inversion, and at the same time necessarily pulling open, in proportion, the mouth of the canal formed by the external surface of the uterus. Through this dilated canal the inverted portion of the organ has to be returned. Until the fundus has passed well within the cervix, the chief effort should be directed to dilating the neck by expanding the fingers in an upward and outward direction. In other words, immediately below the seat of inversion, the uterus should be firmly grasped and (at the *instant* before expanding the fingers) pressed upwards against the hand over the abdomen, which at the same time should be making pressure downwards and outwards, by sliding the parietes over the portion within the cavity. The necessity, however, for augmenting this upward pressure increases directly in proportion to the advance made in the reduction, while the aid derived from expanding the fingers becomes proportionately lessened to the point of completion. No advance can be gained by main force, for it is impossible without rupture for any portion to pass until the necessary dilatation has been effected. Each step, therefore, is to be gained by a steady and persistent effort without violence. So long as the etherization is borne well by the patient, no case must be despaired of in consequence of the apparent want of progress, for at any instant the reduction may be suddenly completed.

In consequence of the continued action of the fingers necessary, I am satisfied that it is beyond the power of endurance for one person to complete the reduction unaided, where the organ has already contracted to nearly its natural size. I fully recognized the necessity insisted on by Dr. Elliot, as stated in the history of the previous case, that a change of hands should be frequently made, and I believe that the progress of any case would be materially increased by fresh aid every fifteen minutes.

This mode of reduction is applicable to all conditions of inversion of the uterus, while it has been successful after the other methods had failed, and the principle is certainly correct in returning first the portion last inverted. The aid of the other hand in steadying the uterus, and assisting in rolling out the inversion, is a most important feature. It is calculated to lessen the risk of inflammation of the vagina, if not of the uterus, for I have seen the vaginal wall lacerated and the attempt abandoned, where the pressure was made at the fundus and the vagina put on the stretch with no counter-resistance beyond the strength of its own walls.

Constitution and By-Laws of Galveston Medical Society.

ADOPTED MARCH 13, 1867.

We publish again the revised Constitution and By-laws of the Galveston Medical Society, with the Fee-bill changed to currency, and we also give a column of charges for the country. From the absorption of gold by the banks, it becomes necessary that currency instead of gold should be the standard. The fee-bill of Galveston Medical Society was modified from the Philadelphia and Atlanta Medical Societies, and the one prepared for the State is taken from the New Jersey State Medical Society. We have modified each to our own city and State. We do this hoping other counties and societies will follow our example. These fee-bills should be put into the back of the Journal and referred to when setting down charges. They are not intended for law, but as guides, subject to modification by county societies. Our only apology for publishing these rules again is, that we have quite an extended list of subscribers that did not receive our first No. of Jan., 1866, with the former Constitution and By-laws, and even those who did, have lost them or mislaid them :—

CONSTITUTION.

ARTICLE I.—This Association shall be styled the GALVESTON MEDICAL SOCIETY.

ART. II.—The Officers of this Society shall consist of a President and two (2) Vice-Presidents, a Secretary and Corresponding Secretary, Treasurer and three (3) Censors, whose duties shall be defined by the By-laws, and who shall be elected by ballot, at the Annual Meeting in January of each year, and shall hold their offices until others are elected.

ART. III—This Society shall be composed of Physicians and Surgeons only, having Diplomas from a regularly constituted Medical College, recognized as such by the American Medical Association. All Physicians and Surgeons of this and other States and of foreign countries may be admitted as Honorary Members.

ART. IV.—Every Candidate for Membership in this Society shall make his application in writing, accompanying the the same by the initiation-fee and satisfactory evidence of his Degree in Medicine or Surgery. In the event of the rejection of the candidate the initiation-fee to be returned to him.

Art. V.—All Members shall be elected by ballot, and only at regular meetings, and by a two-thirds vote of the members present, the application having been presented at a regular meeting of the Society, at least one month previously. Each individual thus elected shall sign the Constitution and By-laws of the Society, thus pledging himself to conform to the same, before he shall be entitled to participate in the proceedings or be considered a member thereof.

Art. VI.—This Society adopts and shall enforce the Code of Medical Ethics of the American Medical Association.

Art. VII.—This Society shall adopt and keep a Common Seal, and shall give each of its members a sealed Diploma of Membership, signed by the President and Secretary. The Seal shall also be used in all official documents of the Society.

Art. VIII—The Society shall meet Annually on the first Tuesday of January of each year; and Semi-annually, on the first Tuesday of July; and Monthly on the first Tuesday of each month. Except January and July, the President shall call speciall meetings of the Society whenever requested to do so in writing by any three members.

Art. IX.—Any Member may be expelled from this Society for immoral or unprofessional conduct by a vote of two-thirds of the Members present, at any regular meeting, provided the accused shall have received notification in writing from the Secretary (whose duty it shall be), of the charges and specifications, and by whom preferred, at least three weeks previous to trial, unless, however, such notification be waived by the accused; but the Society shall be competent, by a two-thirds vote, to postpone such trial to some future meeting, regular or called.

Art. X.—The Members of this Society shall pay an Initiation-Fee of not less than two dollars, nor more than ten dollars, and an annual fee of not less than one nor more than five dollars, to be defined by the by-laws. All other funds used by the Society shall be raised by voluntary contribution of its members.

Art. XI.—It shall be the duty of the Society to collect Books, Pathological specimens, and other objects of interest and value, in a scientific point of view; and it shall be the duty of the Treasurer to take charge of and preserve them for the common benefit of the Society.

Art. XII.—Regular Physicians, not members of this Society, may be invited to be present at its meetings; also, all Apothecaries having diplomas from a regular school of Pharmacy; and all Students of Medicine who are pupils of any regular physician in this city or county.

Art. XIII.—This Society shall adopt a Fee-bill in accordance with the recommendations of paragraph 1, Art. viii., of the Code of Medical Ethics of the American Medical Association.

Art. XIV.—This Constitution may be amended at any Annual Meeting or Semi-annual meeting, by a vote of two-thirds of the members present; *provided*, that notice of such proposed amendment be given at the monthly meeting previous. The By-laws may be amended at any regular meeting by a vote of two-thirds of the number present; *provided*, notice of the proposed amendment be given one month before.

* * *

BY-LAWS.

ART. I.—Five members shall constitute a quorum for the transaction of business; but a less number may meet and adjourn.

ART. II—The President shall preside at all meetings of the Society; in his absence, one of the Vice-Presidents shall preside; in the absence of the Vice-Presidents, the Society shall elect a Chairman pro tem., who shall preside.

ART. III.—The debates and proceedings of the Society, in its meetings, shall be conducted according to Parliamentary usage.

ART. IV.—It shall be the duty of the members of this Society to cultivate the science of Pathological Anatomy, by making post-mortem examinations in all proper cases, and by procuring morbid specimens for the benefit of the Society. They shall also keep a record of all important cases that may occur in their practice, and all facts of peculiar interest connected with the science and practice of medicine, and report the same at the Society meetings.

ART. V.—No money shall be drawn from the Treasurer but by vote of the Society, or an order signed by the President and counter-signed by the Secretary.

ART. VI.—Honorary Members may be elected, at any regular meeting of the Society, by a vote of two-thirds of the members present.

ART. VII.—It shall be the duty of the Secretary to make and preserve, in a book made for the purpose, a record of the proceedings of each meeting, and to file and preserve all Addresses, Reports of Cases and Essays; shall receive and collect all monies of the Society; shall pay them over to the Treasurer and take his receipt for the same.

ART. VIII.—It shall be the duty of the Corresponding Secretary to record, in a book kept for the purpose, all Essays, Reports of Casses and Addresses, and return them to the Secretary for safe keeping, and to do all the foreign correspondence of the Society.

ART. IX.—The Treasurer shall safely keep the funds of the Society, subject to order, as before mentioned, and submit a full statement of his accounts at each annual meeting. It shall also be his duty to take charge of all the property, such as Books, Pathological specimens, &c., and make an annual report of the number and condition of the same.

ART. X.—It shall be the duty of the Board of Censors, in general terms, to apply and enforce the Code of Medical Ethics adopted in the Constitution. They shall examine the diplomas, or proofs of diplomas, of all applicants for membership, and report on the same to the Society.

They shall also, among other duties, be required to interpose their best endeavors to cause a friendly reconciliation whenever apprised of any misunderstanding which may unfortunately occur between members of this Society.

ART. XI.—It shall be the duty of each member to deliver an Address, write an Essay, or Report a Case once in each year.

ART. XII.—Each and every Member shall pay, Quarterly, the sum of One Dollar and Twenty-five Cents, in advance, into the Treasury, in current funds.

ART. XIII.—The Fee-bill of this Society shall be as follows:—

FEE-BILL OF GALVESTON MEDICAL SOCIETY.

GENERAL PRACTICE.

	U. S. TREASURY NOTES.	
	Gal. City.	*State of Tex.*
1. For a visit in the day time,	$4 00	$2 00
2. For a visit at night, after ordinary bed time, or 9 o'clock, P. M.,	8 00	4 00
3. For a single visit in a case in which no further visit is required	5 00	3 00
4. When the physician is detained, for each hour of detention,	5 00	1 00
5. When at the first visit minute physical exploration is required to arrive at a correct diagnosis,	10 00	5 00
6. For advice at office, proportionate to its nature and importance,	$3 00 to 10 00	1 00 to 5 00
7. For such advice, when minute physical exploration is required,	15 00	3 00 to 10 00
8. When the physician is called up at night for advice or prescription,	5 00	1 00 to 3 00
9. When more than one member of a family are visited or prescribed for, each patient,	3 00	1 00
10. For a visit beyond the corporate limits of the city, for each mile an extra charge of	2 00	1 00
11. For a single visit on board a vessel at the wharf,	10 00	3 00 to 5 00
12. For a visit beyond the city by railroad or steamer, for an absence of twelve hours, traveling expenses paid,	25 00	12 00 to 25 00
For an absence in such case for 24 hours, traveling expenses paid,	50 00	25 00
13. For a first visit as consulting physician,	15 00	10 00
14. For each subsequent visit as consulting physician in the same case,	5 00	1 00 and mileage.
15. For a visit as consulting physician during the night,	20 00	10 00 and night "
16. In cases where more than two visits per day are paid the same patient, the physician may at his option make such deduction in charge, after the 2d visit, as he may think reasonable,		do. do.
17. For written opinion or advice to a patient,	20 00	10 00

	U. S. TREASURY NOTES.	
	Gal. City.	*State of Texas.*
18. For a certificate of the state of health of a patient,......................................	$10 00	$5 00
19. For an opinion involving a question of law, $25 00 to..................................	100 00	10 00 to 50 00
20. For treatment of case of Yellow Fever, $50 to	200 00	50 00 and mileage.
21. For treatment of case of Small Pox,....$100 to	200 00	100 00 " "
22. No familes or individuals shall be contracted for by the year.		do. do.*
23. All bills shall be considered due after the patient is cured or the physician discharged,........		End of year.
24. All bills are recommended to be presented and collected immediately after last illness,........		The 1st of Jan

OBSTETRICAL PRACTICE.

1. For an ordinary case of Midwifery..............	30 00	10 00 and mileage.
2. For the removal of the Placenta alone..........	20 00	5 00 " "
3. For difficult and protracted cases of Labor	50 00	25 00
4. For cases requiring the use of instruments or Turning............................... $50 to	300 00	50 00 to 300
5. For any indisposition in the mother or child after the 3d day from confinement, or when any very serious ailment occurs in mother or child, within the three days, a charge is to be made for each visit, as in ordinary cases of disease......		Mileage.

SURGICAL PRACTICE.

1. For reducing fractures and the first dressing $20 to	50 00	10 25
In the above, and all other Surgical operations, the subsequent visits are to be charged.........		Mileage and dressing.
2. Reducing recent luxations,...............$15 to	50 00	15 00 to 50 00
3. " old " .... 25 to	100 00	25 00 to 100 00
4. For Amputation of the Leg or Arm..........	100 00	50 00 to 200 00
5. For Amputation at the Shoulder Joint.........	200 00	100 00 to 200 00
6. For Amputation at the Hip Joint..............	300 00	200 00 to 300 00
7. For Amputation at the Fore-finger or Toe....	20 00	20 00
8. For Resection of the large bones and joints....	200 00	100 00 to 200 00
9. For Resection of the smaller bones............	50 00	25 00 to 50 00
10. For Tenotomy.........................$50 to	100 00	25 00 to 100 00
11. For Extirpation of Tumors.............. 50 to	500 00	10 00 to 500 00
12. For Reduction of Hernia by Taxis....... 25 to	50 00	25 00 to 50 00
13. For the operation for Strangulated Hernia, 200 to	500 00	200 00 to 300 00
14. For radical cure of Hernia, ...100 to	300 00	100 00 to 300 00
15. For Fistula in Perineo................. 50 to	500 00	50 00 to 300 00
16. For Fistula in Ano..................... 25 to	250 00	25 00 to 200 00
17. For operation for Haemorrhoids.......... 25 to	100 00	25 00 to 100 00
18. For operation for Cataract................100 to	500 00	100 00 to 500 00
19. For other operations on the eye and its appendages.....................................25 to	100 00	25 00 to 100 00
20. For operations for removal of Naevus	25 00	5 00 to 25 00
21. For excision of the Uvula....................	10 00	10 00
22. Excision of the Tonsils..................$25 to	50 00	25 00 to 50 00

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*This may be modified by institutions of learning, penitentiaries, jails, and planters guaranteeing for freedmen—one-third off bill for guarantee.

	U. S. TREASURY NOTES.	
	Gal. City.	*State of Texas.*
23. For Incisions in Paronychia,	5 to $15 00	$5 00 to 10 00
The fee for Vaccinations shall be $5, but when more than one member of a family is vaccinated, $3 shall be charged for all cases after the first,		1 00
24. For introduction of the Stomach Pump	25 00	25 00
25. For introduction of the Catheter	$5 to 20 00	1 00 to 5 00
26. For laying open Abscess	5 to 10 00	2 00 to 5 00
27. For reducing Prolapsus ani	10 to 25 00	5 00 to 20 00
28. For Paracentesis Thoracis	30 00	10 00 to 30 00
29. For Paracentesis Abdominis	25 00	10 00 to 20 00
30. For inserting Seton	15 00	5 00 to 10 00
31. For administration of an Anaesthetic	10 00	5 00 to 10 00
32. For dressing wounds at office,	$5 to 10 00	1 00 to 5 00
34. For the removal of foreign substances from the ears, nose, pharynx or œsophagos	$10 to 25 00	10 00 to 25 00
35. For operation for the cure of Hydrocele	$25 to 75 00	25 00 to 50 00
36. For operation for vesico-vaginal or recto-vaginal fistula	$150 to 250 00	100 00 to 200 00
37. For treatment for Gonorrhœa	$25 to 50 00	10 00 to 25 00
38. For treatment of Syphilis	$50 to 100 00	25 00 to 50 00
39. For examination per anum or vaginam	15 00	5 00 to 10 00
40. For examination with speculum	15 00	5 00 to 10 00
41. For introduction of a Pessary	10 00	5 00 to 10 00
41. For a post-mortem examination in a case of legal investigation	50 00	25 00 to 50 00
42. Operation for Phymosis or Paraphymosis	$25 to 50 00	10 00 to 25 00
43. Treatment for strictures of Urethra	$25 to 100 00	25 00 to 100 00
44. Lithotomy	$200 to 500 00	200 00 to 500 00
45. Tracheotomy	100 00	50 00 to 100 00
46. Trephining	100 00	50 00 to 100 00
47. Ligation of arteries	$25 to 300 00	25 00 to 300 00

Committee on Revision of Fee-Bill,

W. D. KELLEY, M. D.,
G. DOWELL, M. D.,
S. M. WELCH, M. D.

Officers and Members Galveston Medical Society.

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DIED.

F. Fredemen, Oct., 1866.
Samuel Randall, Dec., 1866.

Pelvic Hæmatocele.

(Communicated to the Galveston Medical Journal by A. B. Robinson, M.D., Roxbury, Mass.)

The name indicates something of the character and location of the disease.

This malady, though of unfrequent occurrence, merits more notice than it has already received. I have seen but a few cases, consequently do not profess to give any very learned pathological or anatomical paper, but to simply direct attention to the possible appearance of a disease liable to be confounded with others, and of no little importance to diagnosticate on its first appearance.

The first case that came under my observation was in 1858. Mrs. J. H., aged 32 years; married; had borne two children, and had miscarried twice, once before and once subsequent to the birth of her children. Miscarried about four months since; has menstruated twice, though not for the past two months. Her general health has been very much impaired since the last abortion.

At my first visit, in October, she located her pains in lower part of abdomen, with fulness and weight in rectum, difficulty in urinating, with alternate chills and profuse perspiration; tongue loaded; pulse 110 per minute; and features indicating great suffering.

Having previously miscarried, and not having menstruated during past two months, she supposed herself *enciente*, and that she was about to abort, though she said her pains were much more severe than labor pains but had not the same "feel."

I at once made an examination per vaginum, and found a large tumor occupying the posterior pelvic cavity and passing so far and forcibly to the front that it was with difficulty that I passed my finger between it and the pubes to reach the os uteri. This had a natural feel, showing that the uterus was not impregnated. Above the pubes a tumor was plainly felt lying in the median line, or the middle of the tumor corresponding to the median line, while the outline of the uterus was plainly felt forward and upon the pubes. Examination per rectum reached a tumor fitting the pelvic space, pressing upon the bowel and considerably expanding the parts.

My first effort in treating the case was to relieve the present existing unpleasant symptoms, and restore the patient to a more healthful condition. This was accomplished by cathartics, enemas, spt. nitre dulcis, &c., &c., with quieting powders at night and mild tonics. Her appetite improved, bowels regular, urine free. and nights comfortable, but the sensations of fulness, weight, and bearing down did not decrease.

November.—About three weeks have now elapsed since I first saw my patient.

Examination by the vagina and rectum convince me of the presence of a fluctuating tumor which had deceaded farther into the cavity of the pelvis than at my first examination. Undecided as to the exact nature of the tumor, I called a consultation, and it was decided that the only chance of affording relief was to puncture and let out its contents of whatever nature it might be. I at once passed a large trocar and canular into the vagina and through its posterior walls into the tumor. On withdrawing the trocar a stream of red liquid passed, with an unpleasant odor, and, to all appearances, was stagnant, venomous blood, or blood that had not been in circulation, but in a shut sack for an indefinite length of time. Probably twenty ounces passed then and through the following night. She was at once relieved of pain and the sensotions of fulness and bearing down; febrile symptoms disappeared, appetite improved, wound in vagina closed in a few days, and she fully recovered her health in a few weeks.

Without going into a tedious detail of individual cases, it will be sufficient to say that the case just detailed embraces all of the symptoms found in the majority of cases. Though some will differ in detail, the sum total of symptoms in single cases are quite similar.

This is a case occurring between twenty-five and thirty-five years of age, at which time the disease is most liable to occur. She has passed two menstrual periods without flow. Although the patient was taken sick quite suddenly, and the pain very severe with febrile movement and great uneasiness in the abdominal region. She had no persistent collapse with the local and general symptoms of peritonitis, and the opinion was the tumor was sub-peritoneal and not intro-peritoneal, as might be supposed without a careful analysis of the symptoms. The operation proved the correctness of our diagnosis and that it was an extravasation between the vagina and rectum.

The operation of puncture for this disease is made through the rectal as well as through the abdominal walls. I know of no reason why the one should be selected in preference to the other, unless, as in this case, I selected the vagina because there seemed to be a pointing or the tumor presented more into the vagina than the rectum, and, evidently, the distance to it was shortest through the vaginal walls.

The one operation should not be selected for the other on the ground that the liability to wound the peritoneum is greater or less, because it is pushed forward and upward so far that in either case it would not be wounded. If the most dependent portion is in the rectum, that should be the seat of puncture; if in the vagina, then that should be selected.

The circumstances and severity of the case in hand should suggest the time and method of operation. Time and space will not admit of an extended history of this singular malady with its symptoms, causes and treatment, but that we may have a little "more light" I will present a few extracts from the observations and researches of Dr. J. Byrne, though he has not written extensively, he has contributed more to the medical literature of this disease than any other man in this country.

This work is published in New York, and contains much valuable information on this subject. He says:—"There can be no doubt but that this, like some other diseases, were understood and recognized by Hippocrates and Galen, and by the Greek and Roman phpsicians some centuries subsequently, but have been lost sight of for many ages, so that when detected again in our day they appear in the light of entirely new discoveries."

He continues by saying, without stopping to analyse the observations of Ruych or his contemporaries, it may suffice to remark that, about thirty years ago, Profesior Ricamier, on making an incision into the posterior walls of the vagina, for the purpose of evacuating, the contents of a supposed abscess, discovered that, instead of pus, a copious discharge of black, disorganized blood followed.

Some years subsequently M. Velpeau, and, perhaps, one or two others, reported cases of a similar character; but, up to 1850, our knowledge of the pathological lesions preceeding and accompanying this peculiar kind of tumor was very limited.

The escape of blood into the recto-uterine cul-de-sac of the peritoneum has been so long and often clearly demonstrated as to leave no room for doudt; but I think it is safe to assert that, up to twelve years ago, the annals of medicine and surgery did not present more than half a dozen well authenticated cases of encysted pelvic hæmatocele.

Indeed, as regards English and American literature, we might have looked in vain for the slightest allusion to its existence; and, even yet, some of our standard works on the diseases of females deny the subject a single chapter. To Dr, Tilt, of London, Dr. Westand Professor Nelaton in particular are we indebted for the present though very limited knowledge of its pathology.

He then proceeds with an examination and description of the causes, symptoms, and treatment:—

First,—To define the name we may safely say that it is an extravasation of blood into or beneath the pelvic peritoneum, arriving to the location in which the tumor is found, various names have been applied such as "recto-uterine," "vagino-uterine," or "peri-uterine." But, as the extravasated fluid does not invariably select either of the locations indicated, the more general name has been applied, viz.—pelvic hæmatocele.

The causes enumerated are almost limitless, though some, doubtless, are correct, all are very plausable. While some are inflammatory and hæmorrhagic, others mechanical or accidental; mental emotion producing active congestion of the internal organs of generation, and excessive coitus, are regarded as exciting or predisposing causes, all of which point to the procreative system as their origin, and there produce their results.

The symptoms must be in the main quite similar, though each individual case, depending upon a different cause, might have a train of symptoms quite unlike another, all having the same general tendency and producing results not to be misinterpreted when taken in connection with the history of the disease.

The presence of the tumor, with the appearances described, and the history of the case will, I think, afford sufficient information upon which to ground a correct diagnosis. The treatment may be divided into preventive, palliative and curative. There are many of the diseases of the generative system which are functional and mechanical, while others neither come under this head, nor are they strictly organic, but depending upon certain undefined conditions of the system producing disease, the character of which is unforseen, but as surely to produce organic disease as it is sure that they have the symptoms, and it is to this condition of the system that we apply the preventive cause of treatment.

To remove all unhealthy action, restore the equilibrium of the circulation, to combat peritoneal complications by local depletion, and other antiphlogistical means, to remove all mechanical excitants or irritants, constipation or or mal-position of the uterus, relieve pain and support failing strength is the outline of the preventive and palliative.

The curative plan consists in one of two measures:—By puncturing the tumor and exhausting its contents, or by a long course of treatment directed to the absorption of the fluid.

Both plans have been adopted and each has its advocate. Experience has shown too many times the bad results of the expectant treatment when there has been extravasations of large quantities of blood or deposits of pus. In the one case a much dreaded "operation" is avoided, but time and patience are required for a long while, besides the constant anxiety of the attendant lest the result may be an enfeebled system, or sudden death by pyemia, while in the other case, or by the puncture, the tumor is emptied at once, patient is relieved, and all unpleasant symptoms disappear.

In a case stated by Professor Bedford, he penetrated the tumor five times and the patient recovered; and the conclusion of Dr. Byrne is that, "after correcctly appreciating the great danger of waiting in these cases until secondary inflammation or the patient's feeble and worn-out condition warns us that immediate relief or death must soon follow, he is fully convinced that, in a rectro-uterine hœmatocele of any considerable magnitude, it would be safer to penetrate the tumor twenty times than to rely on absorption."

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A List of New Remedies.

THEIR APPLICATION, DOSES, AND MARKET VALUE.

Acid, Carbolic.—A powerful antiseptic, hæmostatic and disinfectant for use in all gangrenous and offensive sores, fetid and ill-conditioned ulcers. Nearly, if not all of the creasote of commerce, for years past, has been obtained from coal tar, and is carbolic acid. It is known also under the synonyms of phenic acid, and hydrated oxide of phenyl. It differs from creasote obtained from wood tar only by the absence of some eupione compounds which are associated with the former. Pure carbolic acid is now introduced into commerce at a price sufficiently low to make it available for sanitary purposes. When anhydrous it is solid at ordinary temperature. The hydrated acid is an oily liquid. Price of crystalized acid per oz., 50 cts.

Acid, Chromic.—U. S. P. Used as an escharotic for morbid growths, venereal warts, etc. It acts by destruction of the tissues from rapid oxidation, while by loss of its oxygen it is converted into the inert sesquioxide. It has been found serviceable in cases of ulceration or erosion about the uterus, vagina, and other mucous surfaces. It is also used to destroy the sensitiveness of dentine, in operations on the teeth. Price, in half-ounce bottles, per oz., $1.

Acid, Hydriodic.—U. S. P. Introduced by Dr. Buchanan, of Glasgow, under the impression that the iodine when administered in this form was absorbed and enters the circulation, producing all the effects of that element on the system, and less prone to offend the stomach. Price, in 1 oz. bottles, per oz., 50 cts.

Acid, Lactic.—U.S.P. Proposed by Magendie as a remedy in certain forms of dyspepsia, and for the removal of phosphatic deposits in the urine. Lactic acid is a useful addition to medicinal pepsin, increasing the solvent power of that agent upon the food when taken into the stomach. Price, in 1 oz., bottles, per oz. 50 cts.

Acid, Sulphurous.—U.S.P. Useful from its fatal influence on the lower forms of vegetable and animal life. Its chief use is as an external application in psora, the different forms of porrigo, trichosis of the scalp, pityriasis versicolor, and the thrush of children; all parasitic affections, either animalcular or cryptogamous, yield to it. It is applied as a lotion, diluted with water or glycerine, by means of cloths wet with it. Price, per pint, 75 cts.

Aloin.—A bitter crystalline principle obtained from aloes by the process of Messrs. T. & H. Smith, of Edinburgh. Aloin is an elegant and reliable preparation which operates invariably as a cathartic, in doses of from one to three grains, and occasionally in that of half a grain. Price, one-eighth oz., $1.

Alum of Iron and Ammonia.—This salt is recommended by Sir James Murray as an astringent, styptic, and vermifuge. It is more astringent than common alum, and is useful as a gargle in relaxation of the tonsils and uvula, also as an injection in leucorrhœa, diarrhœa and chronic dysentery. Dose, 3 to 5 grains, two or three times a day. Price, per oz., 12 cts.

Alumina, Tersulphate.—U.S.P. An astringent and antiseptic, useful as an application to ulcers, and as an injection where a stimulating astringent and antiseptic effect are desired. Sulphate of alumina contains an excess of sulphuric acid, and is more agreeable to the taste than alum. In solution with chlorate of potash it affords an excellent wash and gargle for many affections of the throat and tonsils. As a gargle or wash 1 drachm is dissolved in 4 oz. of water. Price, per oz., 25 cts.

Ammonium, Iodide.—The medicinal uses of this salt are analogous to those of Iodide of Potassium, and it can be substituted for the potassium salt to advantage in ointments. As it dissolves to a considerable extent in glycerine, a liniment can in that way be obtained which is useful as an application to enlarged tonsils, and in certain cutaneous affections. Dose, 1 to 3 grains—as a liniment 30 grains in 1 oz. of glycerine. Price, per oz., 65 cts.

Ammonium, Bromide.—This salt can be substituted for Bromide of Potassium. It has received considerable attention in cases of functional nervous diseases. In epilepsy decided advantage is said to have been experienced from its use. Dose, 2 to 10 grains three times a day. Price, per oz., $1.

Ammonia, Valerianate.—U.S.P. Affords a reliable agent representing the therapeutical effects of valerian, as the taste and odor is strong and persistent. It is usually administered in combination with something to disguise these characteristics. The elixer mentioned hereafter affords a pleasant preparation of the salt. Price of solid Valerianate of Ammonia, per oz., $2.

Apiol.—A yellowish oily liquid, obtained from parsley seeds. Apiol has an effect on the system very much like quinine, and is used as an antiperiodic, also as an emmenagogue. It is said also to have proved useful in the night-sweats of phthisis. Dose, 4 grains. Price, per oz., $4.

BISMUTH, SUBCARBONATE.—U. S. P. Is considered to have advantages over the subnitrate. It is more readily tolerated by the stomach, and by its greater solubility in the gastric juice, neutralizes excess of acid in the stomach, and does not tend to constipate. Dose, 10 to 50 grains. Price, per oz., 60 cts.

BISMUTH, AMMONIOCITRATE.—This preparation known as liquid bismuthi, has met with some favor. In the form of solution, bismuth operates on the system in small doses and with great certainty and effect. It is used in gastric intestinal affections, diarrhœa and nausea. The solution, as found in the shops, is generally of such strength that one fluid drachm represents from 2 to 3 grains of the oxide of bismuth. Dose, 1 to 2 fluid drachms. Price, per lb., $2.

CADMIUM, IODIDE.—A white crystalline salt employed as a substitute for iodide of lead, in the form of an ointment. It has the advantage over the lead salt of not staining the skin. Price, per oz., 90 cts.

CADMIUM, SULPHATE.—U.S.P. Employed as an astringent and stimulating application in diseases of the eyes, used in solution containing 1/ to 2 grains to the ounce. Price, per oz., 75 cts.

CAFFEIN, and some of its salts, particularly the citrate, are employed in some forms of neuralgic and nervous affections. In cases of neuralgic headache it has been used to advantage. Dose of the citrate, 1 grain, to be repeated every hour or two. Price, one-eight oz., $1.50.

CERIUM, OXALATE.—The salts of cerium were brought into use by Prof. Simpson, of Edinburgh. The medicinal effects of the cerium salts resemble those of bismuth in sedative tonic properties. Oxalate of cerium is used in irritable dyspepsia, and the sickness of pregnancy. Prof. Simpson also recommends the oxalate as a good nervine tonic and almost a specific in chorea. Dose, 1 grain, three times a day. Price, per oz., $2.

CHIRETTA resembles the bitters of the Gentian family, and in addition to the general tonic properties of simple bitters it is supposed to exert a peculiar influence over the liver, restoring healthy evacuations in cases of habitual costiveness. A fluid extract of the plant is prepared according to the general recognized strength of such officinal preparations, 1 oz. to the fluid oz. Dose of fluid extract, 10 to 30 minims. Price, per lb.. $2.50.

CHLORODYNE.—Under this name a proprietary medicine has acquired considerable reputation in England as a sedative, anodyne, astringent, and diaphoretic. A preparation similar in medicinal character is described in the American Journal of Pharmacy, consisting of morphia, cannabis indica, chloroform, hydrocyanic acid and aromatics. This preparation has been found serviceable in all cases where a prompt sedative is desired. In some cases it meets the requirement when morphia alone does not answer. It is thought to be less prone to produce nausea than morphia when uncombined with the other ingredients. Dose, 5 to 20 drops. Price, per oz., 75 cts.

ELIXIR OF CALISAYA.—A preparation of Peruvian bark with aromatics, made with brandy in place of alcohol. This is a weak preparation of barks well adapted to enfeebled conditions, especially for women and children. Dose, a dessert-spoonful. Price, per lb.. $1.

Bibliographical Notices.

A Practical Treatise on the Physical Exploration of the Chest, and the Diagnosis of Diseases affecting the Respiratory Organs.—By Austin Flint, M.D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital Med. Coll., N.Y., &c. Second Edition, revised. In one very handsome octavo volume, of 595 pages, extra cloth. Price, $4.50. From H. C. Lea, publisher, Philadelphia.

We take from the preface the following remarks which explain themselves:—"A comparison of the present with the former edition will show that the work has undergone considerable modification. While its plan and essential features are unchanged, numerous important alterations have been made; much has been added, while, by substituting brief statements for certain statistical details relating especially to the healthy chest, the volume instead of being enlarged, has been somewhat reduced in size. The aim of the author has been to present to the student and practitioner of medicine, clearly and comprehensively, an exposition of the physical exploration of the chest, and of the diagnosis of diseases affecting the respiratory organs—striving to divest these subjects of complexity and needless refinements."

This is a practical work from a practical author. We can recommend it as among the very best on this specialty.

A Treatise on the Principles and Practice of Medicine; designed for the use of Students and Practitioners of Medicine.—By Austin Flint, M.D., Professor of the Principles and Practice of Medicine in Bellevue Hospital Med. Coll. N.Y. Second edition, revised and enlarged. In one very handsome octavo volume of nearly 1000 large and closely printed pages. Strongly bound in leather, with raised bands, $7.50; extra cloth, $6.50. From H. C. Lea, publisher, Philadelphia.

From the preface to the second edition:—"Four months after the publication of this treatise, the author was notified that a second edition was called for. The speedy exhaustion of the first edition, unexpected in view of its large size, naturally intensified the desire to make the work still more acceptable to practitioners and students of medicine; and, notwithstanding the brief period allowed for a revision, additions have been made which, it is believed, will enhance the practical utility of the volume. The portion treating of pyæmia has been re-written; three affections, omitted in the first edition, have been introduced, viz.: pertussis, general cerebral paralysis and polyuria; epidemic cholera has been considered at greater length; the thermometric phenomena of disease have received fuller consideration, and, in connection with many affections, there has been added new matter, much of which relates to special therapeutics."

This is an excellent work and brings down the improvements, diagnosis, and practice to the present time, being an improved and enlarged edition from the one we noticed last year. The nomenclature is the latest and best. It is didastic and terse in style and sufficiently full to be plain and comprehensive.

Clinical Observations on Functional Nervous Disorders.—By C. Handfield Jones, M.D., F.R.S., Physician to St. Mary's Hospital, &c. In one handsome volume, 8vo., of 348 pages, extra cloth, $3.25.

During its publication in the Library department of the "Medical News" for 1865 and 1866, this work has acquired a high reputation as a valuable practical guide in the treatment of a very important and obstinate class of affections. Embracing in its scope such diseases as paralysis, epilepsy, dilinum tremens, neuralgia, hysteria, &c., &c., it will be found essentially suited to the wants of the general practitioner·

"The true practical character of its contents."—*Med.-Chir. Rev.*

"One of the most important and valuable works which the medical press has produced this season. * * * * * * We hail the appearance of this book from the pen of one of our most accomplished physicians, and, at the same time, one of our most distinguished physiologists. * * * * * Our readers must study the work if they would keep pace in any degree with the march of medical science.—*Med. Times and Gaz.*

We have read this book with deep interest, especially those parts that refer to paralysis, aphonia and lecomatory ataxis. We shall refer to it again.

A Hand-book on Opthalmic Surgery; for the use of Practitioners.—By John Z. Lawrence, F.R.C.S., Surgeon to the Opthalmic Hospital, Southwark; editor of the Opthalmic Review, &c.; and Robert C. Moon, House Surgeon to the Opthalmic Hospital, Southwark. With numerous illustrations. In one very handsome octavo volume, $2.50. From H. C. Lea, publisher, Phila.

No book on opthalmic surgery was more needed. Designed, as it is, for the wants of the busy practitioner, it is the ne plus ultra of perfection. It epitomizes all the diseases incidental to the eye in a clear and masterly manner, not only enabling the practitioner readily to diagnose each variety of disease, but affording him the more important assistance of proper treatment. Altogether this is a work which ought certainly to be in the hands of every general practitioner.—*Dublin Medical Press and Circular*, Sept. 12, 1866.

Extremely well calculated to give a bird's-eye view of modern opthalmology. As far as it goes it is very clear and accurate; and it mentions nearly every subject of importance. It scarcely contains an irrelevant or unnecessary sentence; and it is an example of the kind of condensation that can only be accomplished by writers who are perfectly conversant with the subject of which they treat.—*The British and Foreign Medico-Chirurgical Review*, July, 1866.

There is very much valuable matter compressed into the book, and its careful perusal will abundantly repay not only one who wishes to get a quick survey of the present state of opthalmology, but also the practitioner to whom it is important to compare others' opinions with his own. We recommend the book to all interested in the subject, not doubting it will contribute to the diffusion of knowledge on an important branch of the art of healing—*Boston Medical and Surgical Journal*, August 2, 1866.

This is a reprint from an English edition of the highest merit, and the latest on this important branch of medical science. The illustrations are good—the work is cheap for the matter it contains, and the above quotations from the English and American press expresses fully our opinion of this work.

A Practical Hand-book of Medical Chemistry.—By John E. Bowman, M. D. Edited by C. L. Bloxam, Professor of Practical Chemistry in King's College, London. Fourth American, from the fourth and revised English edition. With numerous illustrations. In one neat royal 12mo. volume of 351 pages, extra cloth, $2.25. From H. C. Lea, publisher, Philadelphia.

This is a plain practical work. The beauty of it is that it teaches you practical chemistry without an apparatus. Using simple tubes, tumblers and common salts and acid for manipulations, and may be performed in a sitting room or parlor. It is well adapted to primary schools and for private study.

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A List of New Remedies, their application, doses, etc.,
Poisous, and their Antidotes,
Treatment of Persons Asphyxiated,
Medicinal Weights and Measures,
Table for calculating the period of Utero-gestation,
Table for calculating the Probable Duration of Life,

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This is a work of what I term a reformed Eclectic. The editor of the University Journal of Medicine, of which we gave an extended review some time since, by which the reader was taught to believe he had returned to "*legitimate medicine.*" It is the best work of the kind we know, and we recommend it to our eclectic friends, and alopaths may learn from it the use the late alkaloids introduced into "legitimate practice," principally by this system of medicine. This has done us good, and we thank them for it, as the old crude powders and extracts were mere nautiants, while we may receive much benefit from these medicines, and *this work* WORKS with them principally.

BOOKS RECEIVED.

The Medical Record, New York; October, November, December, and January.

Richmond Medical Journal; November, December and January.

Medical and Surgical Reporter; October, November, December and January.

Medical and Surgical Monthly, Memphis; July.

Buffalo Medical and Surgical Journal; October, November, December and January.

Southern Journal of the Medical Sciences; September, October, November, December, January and February.

New York Medical Journal; November, December and January.

The Savannah Journal of Medicine; Octobe and November.

Medical News and Library; October· November, December, and January.

Braithwaite's Retrospect; January.

The Medical Reporter, (St. Louis); November, December and January.

Detroit Review; November, December and January.

Methode Conffaint-Langenfcheidt. Zeitschrift fur practische. Heilkunde. November, December and January.

Atlanta Medical and Surgical Journal; May.

Illustrated Catalogue of Medical, Surgical and Scientific Publications. By Lea, Blanchard & Co., Philadelphia.

St. Louis Medical and Surgical Journal; October, November, December, and January.

The Dental Cosmos; October, November and December.

Prospectus of the Course of Instruction in the Humboldt Medical College, Commencing Septemвer 17, 1877.

Seventeenth Annual Commencement and Catalogue, of Cleveland Homœopathic College.

Medical Reporter; November and December.

The American Journal, new series; October.

Prospectus of the St. Louis Medical College; Session 1866–67.

Boston Medical and Surgical Journal; December and January.

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Southern Medical and Surgical Journal; Price $5. Augusta, Ga.

Circular and Catalogue of the Long Island College Hospital, Brooklyn, N.Y. Session for 1867.

Accidental and Congenital Atresia of the Vagina; with a mode of operation for successfulty establishing the Canal; by Thomas A. Emmet, New York. From author.

Œsophagotomy for the Removal of Foreign Bodies. By David W. Cheever, M.D. Boston: David Chopp & Son, publisher, 1867.

Old Eyes made New; or, How to speedily Restore the Sight and throw aside Spectacles. By E. B. Foote, M. D., author of Medical Common Sense. From author.

Minutes of the Proceedings of the Thirteenth Annual Meeting of the Medical Society of the State of North Carolina, held at Raleigh, N.C., 5th of June, 1865.

Consumption Curable—Receipt for the Cure of Consumption, Asthma, Scrofula, Bronchitis, Cough, Colds, &c. By Rev. Edward A. Wilson, 165 South Second st., Williamsburg, New York.

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Zeitscrift fur Practische Heilkunde (Weekly)	12.00	16.00

METEOROLOGICAL TABLE FOR AUGUST, 1863, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P.M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE	1-3P M	SUN SET	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &c. A. M.	RAINS, FOGS, &c. P. M.	RAINS, FOGS, &c. NIGHT.
Sat...	1	07..09..	..05,08	30.06	0........	S2-4.......S1-3	74	92	82	83	ci8......cccu......	cccu4....cc8.......0	....	....	....
	2	06..09..	..06,06	30.07	0.....S1-3.....	SE1-3......S1-2	73	90	84	82	ci2......cc5......	cucc7....cc8....cis2	........spr	spath NW&E.	....
Mon .	3	09..18..	12,..09	30.11	0.....E2-4.....	E2-5.......SE1-2	73	94	83	83	cu1.....cucc5......	cucc7.......cistr2	....	spr&shrN&E.	....
Tues.	4	09..14..	..07,07	30.11	E1-2..E2-4.....	E2-5.......SE1-3	75	93	83	84	custr2...cucc6......	cudcicc7......cidci8	....	....	....
Wed .	5	07..09..	..06,07	30.07	0.....E2-5..S1-3	......s1-2...s1-2	74	78	77	76	cucistr4...........cu	cudcin9, dcicc8, dci4	ths........	ths	....
Thurs	6	07..14..	09,..09	30.11	0.....S1-3.....	s1-2.........s1-2	76	77	74	75	dcistr5.........ccu10	ccn10.........dcin9	R—— R——	....	........R
Fri...	7	08, 12..	09,..05	30.08	0.....S2-4.....	s1-3.........s1-2	77	82	78	80	ccn10...........ccci8	cccu10........dcistr6	R——	ths&spr NW..	........ths s
Sat...	8	06..08..	04,02	30.05	0.....S2 4.....	....s2-5.....s1-3	75	90	82	82	cicustr3.......ccci7	......ccci4....ccci2	....	....	....
	9	05......			S0-1........		75				cicu2........		....	....	....
Mon .	10		05			...........s 1-3			88			...........str2	....	....	....
Tues.	11	06..09..	.03,04	30.06	0.....S2-3.....	sw2-4........s1-3	77	96	85	86	ccstr6....cccu7......	cucc5..........cicu4	....	....	L to N .....
Wed .	12	06..09..	..03,04	30.06	0.....S1-3.....	se2-4......se1-2	75	95	83	84	cicc4.....cccu3.....	cucc5....cu3....cc1	....	ths W	L to N .....
Thurs	13	04..06..	..02,08	30.02	0.....S1-3.....	s1-4.........s1-3	73	95	85	84	0........cccu8.....	cccu5...........ci1	....	....	....
Fri ..	14	04..06..	..01,00	30.03	0.....E1-3.....	e2-4.......se1-3	73	95	84	84	cuci2.....cccu5.....	cucc5.........ccci3	....	....	....
Sat...	15	04..07..	..04,04	30.05	0.....E2-4.....	e2-4.........e1-2	75	91	83	83	cicu2.....cucc7.....	....cccu5..........	....	shr sw	....
	16	06..08..	07,..04	30.06	0.....S1-3.....	s1-4.........s1-2	75	93	82	83	cicu4.....ccu5.....	....cccu7.....cicc2	....	sp&sh E&W..	....
Mon .	17	07..08..	020504	30.05	0........	s1-3e1-3,e1-3,s01	74	93	75	81	cicu4....cccu5.....	cccu5,..cucc6,..cicc8	........shr	shr ths......	........,R
Tues,	18	04..06..	02,..97	30.02	0.... S1-2.....	e1-4.........s0-1	73	90	82	82	cicustr5........	cucc7........custr4	....	ths E & W..	....
Wed..	19	98..00..	98,..95	29.97	0.....NE1-3....	e2-4.........e0-1	74	91	77	82	cucistr6..cc3......	cucicc5,.dcicc8,.cicu	....	ths NW.....	....
Thurs	20	96..00..	..94,95	29.98	0.....NE1-3....	e1-3...........0	71	93	83	82	cc1......cc6......	cuccstr6.......cicc5	....	thsE	....
Fri ..	21	99..06..	..03,04	30.04	0.....S1-3.....	s2-4.........s1-3	71	91	84	82	cc3......ccdci3....	dcicc8...........cc1	....	....	....
Sat...	22	08..10..	07,..06	30.08	0.....S2-4.....	s1-4.........s1-3	72	96	84	84	ci3......cccu6......	cccu4............ci1	....	....	....
	23	07......	05,..96	30.03	0........	s1-3.........s1-3	72	94	86	84	ci1............cucc5	........cc3.........	....	....	....
Mon .	24	00..04..	99,..97	30.00	0.....S1-4	sw1-3...........0	73	97	80	83	cis2........dcicccu4	ccdci6...........ci2	....	....shr......	....L N & S
Tues.	25	06....03	..09,10	30.11	N1-3..N1-4.....	n2-4.......ne2-4	74	89	83	82	cucc2....cicu2......	cuci3....cccu6......	....	....	....
Wed..	26	15..17..	11,..08	30.13	N1-3..N2 4.....	w2-4..n2-4,.e1-2	67	88	81	80	cc10.....cc3........	cc4......cc2.......0	....	....	....
Thurs	27	07..07..	04,..97	30.02	0.S1-2..SW2-4..	s1-3,e2-4,s2-4s2-4	69	95	80	81	cu1.....ccn3........	cccu5.....cccu7....	....	shr, spr, shr.	NW, SE, NW..
Fri...	28	97..00..	97,..92	29.96	0.....W2-5.....	sw2-5.......w1-3	76	97	85	86	cu2.....cc5........	cccu4, cucc6, cudci6	....	shr W&NW...	thrs........
Sat...	29	05..10..	..06..	30.07	s1-2..SW1-4....	e2-5........se1-3	73	90	84	82	dci10....cidci7.....	cicc7......ci3......	hazy	hazy	....
	30	10..17..	..11,09	30.13	E1-2..E1-3......	se1-3, e1-4, se1-3	70	90	82	81	ci2......ci1........	cucc5..cucc7....ci1	....	....	....
Mon .	31	10..13..	120807	30.10	NE1-2.E1-2.....	e1-3, se1-4, se1-2	65	90	78	78	ci.......0.........	0........cc1.......0	....	....	....
					Force of wind	as 2.50 is to 10.					Amount of clouds	as 4.38 is to 10.			

Max. range 30.17; min. 29.92. 30. 05.62 mean of the month. 82·03 mean of the month; max. temp. 97. min. 65°

General Remarks.—5th—The shrs. were mostly to the S and E, with little rain here. 9th—Leave for Galveston. 10th—Returned this evening. 24th—3 to 4 P. M. heavy shr. passed to W; also from SE to N. 25th—Regular Norther, though not cold. 30th—Hazy all day. 31st—Hazy all day.

METEOROLOGICAL TABLE FOR SEPTEMBER, 1863, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE	1-3P M	SUN SET	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &c. A. M.	RAINS, FOGS, &c. P. M.	RAINS, FOGS, &c. NIGHT.
Tues.	1	09, 15 ..	13, 09,09	30.12	N1-2.....E1-2....	SE1-4.SE1-4. S1-3	63	92	82	79	0.........0........ :	0.........0.........0	....	....	....
Wed..	2	10, 15 ..	11....07	30.11	N1-2.....E1-3....	SE1-3..E1-3..S1-2	67	95	84	82	cucc2....cicc2......	cccu2....0.........ci	....	....	....
Thurs	3	07, 08 ..	05, 01,02	30.04	0.........E........	E2-4.........SE1-3	72	97	87	85	0.........0..........	0.........0........ ci	....	....	....
Fri...	4	03, 06 ..	04....01	30.04	0.........E1-3....	SE1-3,SE2-5,SE1-2	70	97	87	84	cidci4...cidci3	dcici5............ci4	....	....	....
Sat...	5	04, 08 ..	07, 05,06	30.06	0.........E1-2....	E1-3..E1-2..SE1-2	67	96	85	83	ci3.......ci1.........	ci2.......0..........0	....	....	....
	6	05, 09 ..	.. 05, 05	30.07	0.........E1-2....	E1-3.SE1-4.SE1-3	69	94	85	83	0. ......cc2..........	cucc5....cucc4...ci1	....	....	....
Mon..	7	06, 08 ..	.. 05, 06	30.06	0.........E1-4....	SE2-4,.E2-5,.E1-2	71	93	82	82	cccu2....cucc6......	....cccu3.....ccs1..	....	....	....
Tues.	8	08, 15 ..			0.........E1-3....		72				cicc3.....cucc3......		....	....	....
Wed..	9		10			............SE1-2			84				....	....	....
Thurs	10	09, 12 ..	10....07	30.09	N1-2.....NE1-3...	SE2-4,SE2-5,SE1-2	72	94	82	83	ci2....... ....cu	dci6.............dci6	....	....	. ...L to S
Fri...	11	08, 13 ..	.. 07, 07	30.10	N1-2.....E1-4....	SE1-4.......SE1-2	75	87	81	81	cicudci5..........cu	dcicis......... ccdci6	..........ths	.......thsw	....
Sat...	12	09, 13 ..	05, 03,04	30.08	0.........SW1-3 ..	E1-2.........E0-1	71	9[illegible]	84	82	ccstr8... cccicu7....	dcicc8.......cucicc5	....	....	....
	13	05, 06 ..	.. 99, 99	30.03	N1-2.....S1-2	SE1-3..SE1-2.E1-2	72	97	81	83	cicc4....ccdci4......	cucc8.......ccdcicu9	....	ths	R...........
Mon..	14	04, 07 ..	05....04	30.05	0.........E1-4....	S1-4...........S0-1	75	87	75	79	cccustr9.cucc7......	cucc9.......... ncu9	....	fhs....spr.	....
Tues.	15	05, 08 ..	.. 04, 04	30.06	0.........SE1-3...	S1.2...........S1-2	73	78	77	76	cccicu6..cccu9......	ncu10........ncucc9	.... ths	spr.........R	....
Wed..	16	00, 02 ..	97, 93,94	29.99	S.........S1-4	S1-2...S2-4..S1-4	73	93	81	82	ccstr9...cccc5......	cucc4............ccs2	....	spr.shr.E&W	....
Thurs	17	93....97	.. 92, 94	29.94	4.........S1-2	S1-4..W2-4. W1-3	73	90	81	81	cc2.......cc4.........	cccu4.... .....cicc3	....	....	....
Fri...	18				N.........N4-5....	..N4-9........N..							....	....	....
Sat...	19												....	....	....
	20	...13...	.. 08, 07		S1-2....S2-4. ...	....,... S1-2....					...........0..........	0.................ci1	....	....	....
Mon..	21	13, 17 ..	.. 14, 16	30.15	0.........W2-3 ...	S2-4...S1-4.....0	61	87	78	75	cuci1..............cu	cc5....cucc7...cicc4	....	....	....
Tues.	22	17, 18 ..	.. 14, 15	30.16	N0-1.....N1-3....	E1-4..SE2-4.SE1-2	63	87	76	74	ccs2......cc2..........	cucc4.............cc2	....	....	....
Wed.,	23	15, 17 ..	15, 12,15	30.15	0.........E1-4....	SE1-4..E1-4..ES-2	60	87	78	74	0..........0	0..........ci1.......ci1	....	....	....
Thurs	24	15, 17 ..	12....10	30.14	0........ E2-4....	E2-4...... .SE1-2	63	89	82	78	0..........0...........	cc2... ....ci1	....	....	....
Fri...	25	09, 12 ..	.. 07, 07	30.10	0.........NE1-2...	SE1-2.E1-3.SE1-2	62	89	80	77	cidci4...cidci4......	dci8........ .....dci7	....	....	....
Sat...	26	07, 09 ..	.. 04, 05	30.06	0.........NE1-2...	S2-3...S1-2..S1-3	62	90	80	77	dcidci3..cidci6......	dci7....dci8....dci8	....	....	....
	27	03, 04 ..	01, 96,96	30.00	0.........E1-2....	SE1-2..S2-4..S1-2	69	83	78	77	dci10....dci10	dcicc10...d.cicccu10	....	....	R..........R
Mon..	28	84, 86 ..	76, 71.63	29.75	E1-3.....E1-4....	SE3-5.E3-5..E4-6	70	69	66	68	ncc10...n10	n10.......n10....n10	R—....R.—	R. .R.....R	R—— th L.
Tues.	29	50, 49,50	50, 49,53	29.51	E1-3.NE1-3..E1-3	NE2-4.........N1-3	68	72	71	70	ccci8....ccn8.........	n10.......n10...ccn9	..R——......	R...R......	....
Wed..	30	73, 81 ..	85....89	29.81	N2-4.....N3-4....	N3-5..N3-5..N3-5	68	71	71	70	ccn9.....cc10........	cc10.....cc10.....cc9	spr..........R		....
					Force of wind	as 3.00 is to 10.					Amount of clouds	as 3.94 is to 10.			

Max. range 30.'18; min. 29'49; 30.'02.49, mean for 25 days. 78°60' mean for 25 days. Max. temp. 97°; min. 60°.

The storm of the 28th and 29th much more severe at Galveston and East of Galveston than here. At Sabine Pass wind took off limbs of trees. At Washington but little wind but heavy rain. At Velasco wind very high, as on the coast generally.

GENERAL REMARKS.—1st—Hazy all day. 2d—do. 3d—do. 4th—do. 5th—do. 6th—do. 7th—do. 8th—Hazy; leave for Galveston. 9th—Returned this morning. 10th—Hazy. 13th—Thrs. to S & W (3 to 4 P, M.); also to SW, 8 to 9 P. M. 14th—Ths. passed to NW, 2 P. M. 18th—At home sick; strong Norther, but not cold. 22d—Hazy. 23d—do. 24th—do. 25th—do. 26th—do. 28th—Heaviest fall of water I remember in the time. 29th—Rains light to-day.

METEOROLOGICAL TABLE FOR OCTOBER, 1868, AT Houston.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SNU RISE	1-3 PM	SUN SET	MEAN THER.	CLOUDS. A. M.	CLOUDS. P' M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Thurs	1	08....04	.. 30, 00	30.00	N1-4... N3-4....	N1-4........N1-3	59	77	74	70	0........0	0........0........0			
Fri ..	2	02....06			0........N1-2....		52	..	..	..	0........0				
Sat...	3						..	..	..	..					
	4						..	..	..	..					
Mon .	5						..	..	..	..					
Tues.	6						..	..	..	..					L to NW....
Wed .	7	00, 07 .	05, 07 ..	30.04	0........NW1-4..	NE2-4.N2-4. N1-4	64	84	74	74	ccstr6...ci3	cc2......0........0			LtoNE 5½p.m
Thurs	8	10, 16 ..	11....08	30.12	NE1-2..E1-3.....	E2-3........SE1-2	51	76	69	65	0........0	0........0........0			
Fri ..	9	07, 12 ..	09, 07,07	30.09	0........SE1-2...	SE1-2,SE1-3,SE1-2	49	80	71	66	0........0	ci2......ci1......ci1			
Sat...	10	09, 13 ..	10, 08,09	30.11	0........E1-2....	SE1-3,SE1-2,SE1-2	51	81	72	68	ci3......ci2	ci3......ci4...cicc4			
	11	08....12	.. 07, 06	30.09	0........E1-2....	SE1-3, SE1-3, E1-2	51	78	75	68	ci1......ci3	....dcis10....dcis10			
Mon .	12	99, 03 ..	97, 93,90	29.97	0........S1-2	SW2-4, SW2-4, SW	60	86	78	75	cistr2...cc3	cccí3...cccn4......0			L NE....L SE
Tues.	13	86, 91 ..	85, 82,81	29.86	0........SW1-4...	N1-4, W1-4, N1-2	67	86	78	77	ccstr6 ..cc2.	cu1......0........0			
Wed..	14	90, 96 ..	94, 91,92	29.93	N1-2....N2-4....	N2-4..N1-4..N1-2	51	72	69	64	0........0	0........0........0	hazy......		
Thurs	15	93, 96 ..	.. 90, 90	29.93	N0-1....W2-3 ...	S1-3........SE1-2	47	80	71	66	0........0	0........0........0	do		
Fri...	16	83, 83 ..	.. 72, 70	29.76	0........S2-4	S3-5..........S3-4	53	83	76	71	0........0	......cc2......ccs8	do		
Sat...	17	66, 72 ..	72, 70,72	29.69	S1-3....S3-5-....	S4-5,..S2-4..S1-3	73	88	81	81	cc8......cc1	cccu7....cc2.. cccn3			L NE &W.....
	18	02, 10,07	.. 04, 04	30.06	NE1-4...N3-5....	N2-4,NE2-4,NE1-0	63	79	73	72	cc7......ci2	0........0........0			
Mon .	19	95, 95 ..	94, 86,82	29.88	0........SE2-4...	S2-4..S2-4...S2-4	50	80	72	67	0........0	cc7. ....cc9....cc9			
Tues.	20	82. 86 ..	87, 87,92	29.87	0........S2-4	S2-4..S2-3...S1-3	71	90	82	81	cc6..cc2..cc8	cc3......cc2......c0			
Wed..	21	06, 10 ..	08, 07,12	30.09	N1-3....N1-3....	E2-4..E2-4..E1-4	70	76	71	72	ccn10..ncc10..cccu5	ncucc8..cc7..dcicn8	spr..R	..R	
Thurs	22	18, 15 ..	14, 08,11	30.12	N1-3....N1-3....	N1-3..N1-4..N3-5	62	64	55	60	n10......n10	cc10....cc9........0	R.	R——....R	R..........
Fri ..	23	16, 19 ..	16, 12,12	30.15	N2-5....N3-5....	N2-4..N2-4..N0-1	42	43	45	43	n10......ncc10	cc10....cc9........0	R.		
Sat ..	24	15, 18 ..			N1-2....N1-3....		33	..	..	..	0........ci3.		frost.		
	25						..	..	..	..					
Mon .	26				winds at Galves-		..	..	..	..					
Tnes.	27				ton Northerly		..	..	..	..	....ccs at Galveston	all day.			
Wed .	28		.. 97, 97		during my stay.	....SE1-4..SE1-4	..	74	69	..		....cc7....ccstr9...			
Thurs	29	86, 87 ..	82, 80,79	29.84	SE1-3...SE2-4...	S2-5..S2-4...S1 3	66	81	74	74	cc8 .....cc9	cucc5....cc3.....cc3	R light.		
Fri...	30	90....97	96, 97,00	29.95	N2-5....N4-5....	N2-5..N2-4..N0-1	41	45	48	45	ccn10....cc3	cc10.....cc3........0	R		
Sat...	31	07, 09 ..	07. 03,04	30.06	0........E1-3....	SE1-3..E1-3. E0-1	34	65	55	51	0........0	0........0........0	frost.		

Force of wind as 3 is to   Amount of clouds as 2.76 is to 10

Max. range 30.'19; min. 29.'70. 29.'98.24 mean for 21 days 67°14 mean for 21 days. Max temp. 90°; min. 33°.

General Remarks.—2d—Leave for Galveston 9 a. m. 4th—Weather at Galveston mostly clear: Wind North for 2 days and then Southerly. 6th—6 p. m. returned from Galveston. 12th—Doubtless a Ths. to NE, as edge of cloud and L. visible but no Th. heard. 20th—9 p. m. wild geese going Southerly. 21—Smokey. Rain nearly continuous from 6½ to 10 a. m. 22d—Wild geese going South day and night. 23d—A cold and wet Norther. 24th—Leave for Galveston. 28th—Returned.

METEOROLOGICAL TABLE FOR NOVEMBER, 1863, AT HOUSTON.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SUN RISE..	1-3P.M	SUN SET...	EEAN THER.	CLOUDS.		RAINS, FOGS, &C.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P. M.	A. M.	P. M.	NIGHT.
	1	02, 03 ..	.. 94' 96	29.99	NE1-2...E1-3....	E3-5..s3-5...s2-4	48	80	74	67	ncc10....n10.......	cccuci10,ccciCu7 ccci	spr....R....	....	....
Mon..	2	02, 10 ..	06....07	30.06	SE1-3...s1-3.....	s2-4..s2-4..SE1-3	68	85	75	76	.........cc2...	cc7....cccu7....fc10	fog..........	....	....
Tues.	3	09, 15 ..	12, 10,10	30.12	SE1-2..,SE1-3 ...	SE1-3.SE2-4 SE1-3	69	80	71	73	fcR10....cc9........	cc7....cccu7...,fc10	fog........spr	....	.........R..
Wed..	4	07, 08 ..	05, 03,04	30.06	SE1-3..,SE2-4 ...	SE1-4,SE2-4 SE1-3	71	76	72	73	ccn10....ccn10.....	ccn9...n10..cccistr6	R.....R......	..R.........	L..........
Thurs	5	05....08	06....06	30.06	s1-2...s1-2..E1-2	s1-2..s1-3...s1-2	70	75	74	73	ccn10....ncc10.....	ccncu10,.ccn9. ciec3	fog..R.. R—	....	fog.........
Fri...	6	11, 16 ..	12, 09,10	30.12	0.......SE1-3....	SE1-3.SE1-3. s0-1	65	83	75	74	fc9.......cc9........	cccu7...cucc4... cc1	fog..........	....	....
Sat...	7	10, 15 ..	12, 09,10	30.12	0.......s1-2......	SE1-2..E1 2..s1-0	60	86	77	74	ci1.......cc2	cucc5,.cucc3..ccstr2	fog	....	L N W. L N
	8	18, 26 ..	.. 25, 26	30.22	N0-1...E2-4	.....E2-4..NE1-2	63	83	72	73	cccu6....ccci2......	.......cicc3 ...cicc3	....	....	....
Mon..	9	40, 45 ..	40, 35,36	30.40	N1-3...E2-4	E2-4..N2-4..N1-0	47	70	65	61	0.........0..........	0.........0.........0	....	....	....
Tues.	10	44, 48 ..	40, 36,36	30.42	N0-1...E2-4	E2-3.E2-3.. SE0-1	41	67	57	55	0.........0..........	0.........0.........0	....	....	....
Wed..	11	29, 29 ..	25, 19,19	30.24	0.......SE1-3....	SE1-4..s1-4..s1-2	38	71	59	56	0.........0..........	0.........0... ci	frost	....	....
Thurs	12	08, 09 ..	05....00	30.05	0.......s2-4	s2-4...s2-4..s2-3	48	78	69	65	cicc3....dcici4......	cc10....ccci7....cc9	....	....	....
Fri...	13	96....02	.. 96, 97	29.99	s1-3...s1-3......	s2-4...s2-5..s1-3	64	83	73	73	cc8......cidci2......	cccu8,dcicicc3,ccstr7	....	....	....
Sat...	14	40, 17 ..	14, 13,15	30.14	N1-2...N2-4......	N2-4..N2-4..N0-1	59	77	67	68	fcci2.... 0..........	0.........0..........	....	....	....
	15	16, 19 ..	12, 11,11	30.15	N0-1...N1-2......	N1-3...N1-2....0	44	77	71	64	0.........0..........	0.........0..........	....	....	....
Mon..	16	08, 11 ..	07, 04,05	30.07	0.......E13......	E1-3...E1-2 0	43	81	66	63	0.........0..........	0.........0..........	....	....	....
Tues.	17	04, 06 ..	01....97	30.02	0.......SE1-3....	s1-3...s1-3.. s1-2	47	78	67	63	0.........0..........	0.........0..........	....	....	....
Wed..	18	93, 95 ..	87....84	29.88	0.......s1-3	s2-4...s2-5.. s2-4	55	78	69	67	cc9.......cc8........	cccu5..cccu7..ccstr3	....	....	....
Thurs	19	79, 82 ..	77, 78,77	29.79	s1-2...s1-3......	s1-3...s1-4..s1-3	67	72	70	70	ccs.......cc10.......	cccu10.ccn10.ccciCu7	..........spr	shrs........	R— ....
Fri...	20	06....15	.. 09, 09	30.11	N1-5...N1-5......	N1-4.........N0-1	45	50	50	48	ccn9.....cc7........	ccs7.......... ccstr3	spr..........	....	....
Sat...	21	05, 14 ..	08, 05,06	30.09	0.......w1-3,....	sw1-3,sw1-2,s1-0	33	74	65	57	0.........0..........	0.........0..........	frost........	....	....
	22	08, 13 ..	10....06	30.10	0.......E1-4	SE2-4 SE2-4,SE1-3	41	72	61	58	0.........0..........	cc2....cc2.....cistr3	frost........	....	.......R....
Mon..	23	94, 95 ..	93, 90,89	29.92	0.......E1-2	E1-3...SE1.3.....	51	78	71	66	fc10......fc10.......	cccicu5, cccu7, ccstr8	....	....	....
Tues.	24	09, 19 ..	16, 16,16	30.13	N2-4...N2-5......	N2-5..N2-4..N1-3	47	64	57	56	ccstr4...cc8........	ccs3 ....ci1. ....cf1	....	....	....
Wed..	25	18, 26 ..	19, 15,17	30.21	N0-1...N0-3,.....	N1-3....N1-2...0	41	66	58	55	ccstr2...0...........	ci2.......ci2.....ci1	....	....	....
Thurs	26	07, 13 ..	07....04	30.09	0.......E1-3.....	SE1-4 SE1-4 SE1-4	38	63	61	54	cc8.....cc9.........	ccs10...cc10...ccn10	frost	....	R..........
Fri...	27	92, 90 ..	82, 75,79	29.93	s1-3....s2-4......	s2-4.. s2-5.. s1-4	67	74	73	71	ccs10...ccn10.......	ncc10....cc9.....cc8	.......R......	R..........	..R.........
Sat...	28	98, 16 ..	15, 15,20	30.09	N2-4...N2-5......	N2-5..N2-4..N1-2	36	48	40	41	ccrf9...ccn10.......	ci3....... ci2......0	spr	....	....
	29	32, 39 ..	48, 39,48	30.40	N2-4...N2-5......	N2-5..N3-4..N1-3	24	46	43	38	0.........0..........	0.........0.........0	ice..........	....	....
Mon..	30	48, 58 ..	60, 56,59	30.54	0.......w1-3.....	NW1-3,N1-3, N0-1	22	65	57	48	0.........0..........	0.........0.........0	frost and ice	....	....
					Force of wind	as 2.88 is to 10.					Amount of clouds	as 4.08 is to 10.			

Max. range 30.'60; min. 29.'75. 30.'11,37 mean for the month. 62°66 mean of the month. Max. range 86°; min. 22°.

General Remarks.—4th—Light rain in sky. 5th—L. to N 7 to 9 P. M. 8th—Probable Ths. to N. between 4 to 6 A. M. 15th—Hazy all day. 16th—Hazy all day. 17th—Hazy all day. 19th—7 P. M. strong Norther with rain. 26th—At 5 A. M. the sky was clear and a frost; at 6 A. M. cc clouds came up, 27th—Norther came in at 7 P. M. 29th—Water froze in the house. 30th—Ice 2 to 3 inches thick in a barrel standing out of doors.

THE
Galveston Medical Journal.

Vol. II. MARCH, 1867. No. 3.

Dropsy.

Dropsy is of two kinds—or originates either from derangement in the circulating organs,

I. CARDIAC DROPSY.

Or originates from derangment of the secreting organs,

II. RENAL DROPSY.

The term dropsy is applied to all exudations of water into cavities or into the cellular tissue, and the different varieties are not subdivided under the above heads, but apply to both forms. The causes of dropsy are various and originate from a variety of circumstances. Any impoverished state of the the blood will produce an effusion of water and cause dropsy. When there is any obstruction to the free passage of the blood through a part, there will be effusion into a cavity or transfusion into the cells forming water. This water or fluid is usually of the following constitution:

ANALYSIS OF DROPSICAL FLUIDS.

Water—protoxide of hydrogen	952.30.
Albumen	23.80
Urea	4.20
Chloride of sodium	8.10
Carbonate of soda	2.10
Phosphate and sulphate of soda	0.60
A viscid substance	8.90
	1000.00

This water is not the liquor sanguinis of the blood, nor is it pure serum, but it in all cases contains more or less albumen, but the largest part is pure water—the protoxide of hydrogen mixed with salts.

In many cases there is pus, fibrin and albumen with globules of blood, which gives to the fluid a muddy, dirty appearance, but in most cases the fluid is as pure and clear as water.

When the blood does not circulate for want of power in the heart, arteries, capilaries and veins, the disease is cardiac; or produced from the heart, that is, general dropsy or

HYDROCELLULASIS.

From udor water-cellulæ—cells—that is, water in the cellular tissue, and this may be specified by the anatomical parts, as *hydrocellulasis*, *anasarca*, *acites;* that is, that swelling of the neck from the transfusion of water into the cellular tissue of the neck, which occurs in compression of the jugular veins or any obstruction to the return of the blood to the right oricle, which is sometimes produced by anurism of the aorta. The patient will have a swollen and œdemitus skin and cannot lie down for fear of suffocation, when the lower extremities will be quite natural provided the circulation is good.

The obstruction may be at the ilio-pectinial ligament—Poupart's ligament—by obstruction in the saphœna vein, and we will have varicose veins and dropsy of the cellular tissue of the lower extremities—hydrocellulasis extremeta.

The obstruction may be in the liver, produced by congestion and inflammation of the liver, the flow of the blood through the portal vein, and then we have an effusion into the peritoneal cavity which we call hydroabdominis or acites. The effusion taking place alone from the portal vein, which collects the blood from the viscera of the abdomen, and has to pass through the liver to assist in the formation of bile. The obstruction may be in the pulmonary veins or in the pulmonary capilaries, and then we have

HYDROTHORAX,

or dropsy of the chest. This obstruction may be from tubercles, pneumonia, pleurisy, or compression of the bronchial veins by an anurism or other tumor formed in the thorax which will obstruct the ready flow of the blood to the heart, or there may be derangement and disease of the mitral valve, by which the blood is regurgitated as it were back into the lungs by the systole or contraction of the left ventricle.

The obstruction may be in the heart itself—hydrocardiasis—dropsy of the heart. This may be from obstruction in the semiluna valves by which the blood in the heart cannot pass out to the lungs or through the general circulation through the aorta. This may also occur from rheumatism of the heart whereby there is a subacute inflammation of the pericardium and an effusion of serum or water into the space around the heart or in the heart.

Abdominal dropsy may be produced by compression of the ascending venal cava by enlargement of the spleen, liver, or stomach, or by anurisms of the abdominal aorta, or cancer and induration of the pancreas, or tumors in the mesenteries, or tuberculosis of the mesentery, omentum. All inflammation may obstruct the capilary circulation and cause transfusion of serum, forming dropsy of the particular part. *These obstructions to the circulation* forming CARDICAL DROPSIES may be from an infinite number of other diseases, caused by a like infinite number of external causes.

RENAL DROPSIES.

These occur mostly from a want of absorption or secretion of the kidneys. Exhalation and absorption are not equal. This is often caused by change of temperature, when the exhalants and absorbants as the skin, the lungs, the kidneys and alimentary canal are changed in their action and water is accumulated in the blood, or rather the proportion of the serum to the red globules and the fibrin are increased, making a watery blood, then effusion may take place in the weakest organ of the body as before and form the above named varieties of dropsy as given in cardiac dropsy.

This one quality may be produced by scarlet 'fever—scarlatina,—and this is one of the most common causes of renal dropsy, or it may be from small-pox, measles or any eruptive disease that will or does affect the exhalents of the skin throwing too much work on the kidneys, the lungs and the alimentary canal. Renal dropsy is often caused by disease of the kidney itself, acute inflammation of the kidney. Evisceration of the pelvis of the kidney by a calculous degeneration of the tubulæ urinifiri, and effusion of albumen as in abuminuria, diabetes mellitus, where the system is reduced by the discharge of albumen in one case and the discharge of sugar in the other. The kidneys may be congested by malarial causes, and we will have hæmaturia from this cause; as I have seen in several cases, and in all such the convalescence is slow and tedious. Most cases of diabetes die from dropsy. Most cases of Bright's disease (albuminuria) die from dropsy. Most cases of chronic diarrhœa die from or with dropsy. As the blood becomes so thin from the want of chyle in the blood, that it absorbes water from the stomach in the place of pure chyle, and this fills the blood with water faster than the kidneys can take it up. Hæmorrhgies from the nose, lungs, stomach, uterus, and from all wounds involving the arteries or the veins, excessive bleedings, or the use of poisons, especially arsenic and its compounds.

We have thus drawn as distinctly as possible the difference between dropsies caused by the *circulation* and dropsies caused by the want of co-ordination between the *exhalents* and the *absorbents*, renal dropsies. By a careful review of what we have said, it will be seen how complicated is the true pathology of dropsy, and that the word dropsy in its strict sense is only a symptom and all its special varieties are merely special symptoms of special diseases, either involving the circulating organs or the glandular—receiving or secreting organs.

SPECIAL DROPSIES.

In our description of special dropsies we will begin with *anasarca—hydrocellulasis.*

Symptoms.—This is known first by a swelling of the eyelids, the feet during the day and the hands during work—as the very first symptoms, the eyelids are swollen in the morning, the feet at night and the hands when hanging down for any length of time. The countenance is pale and anemic, the skin pits on pressure, leaving a white space where the pressure is made. The respiration is short, the abdomen swells, the legs enlarge and the whole body is filled with water, or the general cellular surface is filled with water.

CAUSES OF HYDROCELLULASIS.

The principal cause of general dropsy of the cellular tissue is rheumatism of the heart, producing valvula disease, or from the exanthematosus fevers, or scarlatina, variola, rubeola and the syphiloid eruptions. Hæmorrhagies are also a very frequent cause of this form of dropsy. Diarrhœa and consumption, or tuberculosis of the lungs and the mesenteries, indurations of the spleen and liver, diabetes mellitus, diabetes insipida, albumenuria, &c., about in the order in which we have mentioned them.

TREATMENT OF HYDROCELLULASIS.

There are some general hygienic rules to be followed in the treatment of all dropsies, especially general dropsy. In all cases should be further specially directed to the primary cause as well as the medical treatment.

Hygienic rules for treating general dropsy:—

The diet should be nutritious and easily digested; nothing should be eaten that is not well digested.

The clothing should be flannel or woolen to keep up the exhalations from the skin and lungs.

MEDICAL TREATMENT.

All coughs, colds, diarrhœas, inflammations and indurations should be cured by their specific treatment. Then to relieve the accumulation of the water we should excite the kidneys by diuretics, the best being the salts of tartar. The alkaloids, jalapin, buchin, digitalis, horse-radish, mints, gin, tinc. of juniperi seminis.

We should excite the glandular system to absorption by giving mercurials, antimonials, purgatives and diaphoretics. The best of these is calomel, tartar emetic, elatereum and quinine, or we may select diuretic purgatives such as jalap, cream of tartar, leptandin, &c. When the water accumulates in any portion to such an extent as to be liable to produce sloughing or gangrene we should resort to surgical means such as puncturing the scrotum, the legs, the arms, and the penis, all of which I have seen saved from gangrene by letting out the water with a trocar or lancet. When the water accumulates in the brain and cannot be removed by any or all the remedies above suggested, we may and ought to perform paracentesis capitis; that is, relieve the pressure on the brain by evacuating the water through the smallest canular and bandaging the head with adhesive strips, and continue our treatment by absorption. If the water accumulates in the chest, producing

HYDROTHORAX,

we should perform paracentesis thoracis, and let out the water to allow the lungs to expand and the blood to be better arterialized and made richer. This should be carefully done so as not to admit air or produce an accumulation of pus, which, if it is formed, must be let out also and in the same manner, and the general treatment by absorption and excretion continued.

If the water accumulates in the pericardium we may use compression by bandaging as we should in all other cases where dropsies are formed in serous cavities, but it is not practical to puncture the sack surrounding the heart. We should use all means to produce absorption by restraining the patient from water, from eating watery food, excite perspiration by quinine, use diuretics and purgatives continued doses; but in moderation and not to debilitate or affect the digestion.

If the water accumulates in the peritoneum, forming acites-hydro-abdominis, and it cannot be removed by purgatives, diuretics and diaphoretics, we may relieve the tension of the abdominal wall and also the pressure of the viscera by performing the operation of paracentesis abdominis. This form of dropsy is more amenable to purgatives than any other, and more good has been done by tapping in this disease than in any other. I have used it with success in four cases out of five that I have performed the operation. One was tapped twice and died; one was tapped three times and recovered; two were tapped twice and recovered; one was tapped only once and recovered; one I inserted after tapping three folds of thread of silver wire and left it in as a seton for ten or twelve days until the wire was enclosed by peritoneum and ceased to run, when I took it out. Patient recovered so as to be able to leave the hospital for Alabama. He felt no inconvenience from the silver wire, but had to be tapped again before he was able to walk about. But during that time I applied my pressure and internal remedies to great advantage, and he never was so bad afterwards.

When the accumulation takes place in the ovaries, forming also acites, we should be very careful of our diagnosis and the history of the rise of a tumor in the right or left iliac region, and its gradually rising should be particularly noticed, and also in these ovarian dropsies the general health is not much impaired at first, and never so great until the last stages. It does not affect the respiration so much; it does not so early prevent the patient from lying down. Is generally more to one side than another; does not flow from side to side as in abdominal dropsy.

THE TREATMENT

Should be varied from that above given, as purgatives and diuretics do not do so much good, and we have still more to rely on tapping and compression and external blisters with mercurial unctions.

When the accumulation takes place in the tunica albuginia testis, it forms what we call

HYDROCELE—(HYDROTESTALIS.)

This is known by an enlargement of the peritoneal surface of the testicle and the filling up with water of the tunica albuginia. It is distinguished or diagnosed from hernia scroti. hæmatocele, enlarged testicle, or orchitis, by its soft transparent nature and by its not affecting the general health of of the patient. The treatment alone is surgical as all internal remedies are useless and even injurious.

The water is let out by a canular and either a seton put in or the spirits of wine or tincture of iodine is injected, and then the testicle is bandaged with adhesive strips. I prefer the seton in old and bad cases, the tincture of iodine injections in recent and mild ones.

TREATMENT OF DROPSY FROM MALARIAL DISEASES.

This form of dropsy is always complicated with enlarged spleen and indurated liver,—yellow, sallow skin, and is by far the most common form of dropsy I have seen and had to treat, and is the most amenable to treatment when judiciously administered, almost every case can be cured.

TREATMENT.

I usually commence by giving the following proportions once or twice each day, and following with quinine according to circumstances. If patient has fever, I always give quinine after the purgative in large doses. For an adult I give

R.—Hydr. chl. mitis, xx. grs.
Antimonii et potassæ tartratis, ii. grs.
Elateri pulveris, i. gr.
Me. F chartas, No. ii,

One in the morning and the other at night. If it debilitates or purges too much, I only give one dose in the morning and the quinine at ten o'clock.

R.—Quinæ sulphatis, xx. grs.
Potassæ nitratis, v. grs.
Me. P. chartas, No. 4.

One every three hours or two powders, if chill is expected before twelve, one at ten, the other at twelve. I continue this from day to day, if the patients strength holds out, and they will generally gain strenght under this treatment. Where the spleen is much enlarged I apply blister after blister over the enlargement. Where the liver is specially involved by enlargement or induration, I also blister over its tender surface. I afterwards bandage with roller bandage and apply mercural ointment over the abdomen covered by oil silk.

Having thus reduced the dropsy, I give daily the following:—

R.—Ext. taraxici, xx. grs.
Quinæ et ferri. citratis, xxiv. grs.
Juniperin vel. ext. digitalis, ii. grs.
Me. F. pills, No. 12.

S.—One three times a day. I also allow my patient Holland gin or schnapps to drink.

Most cases will soon be cured by this plan, but many may be cured by much milder means; and where there is no complication from malarial causes but if the dropsy is produced from some of the exanthemata I give the following:—

R.—Potassæ et sodæ tartratis, 1 oz.
Jalapi pulveris, xx. grs.
Me. F. chartis, No. 2.

S.—One, moring and night, to be continued from day to day until patient is relieved. I have also used in these cases preparations of quinine with juniper berries.

The oil of juniper and oil of cubebs in chloroform thus:—

R.—Olei. juniperis,
Olei cubebis aa. i. drach.
Chloroformi, i. oz.

S.—Give ten to twenty drops three times a day. This is an admirable prescription and does not debilitate or weaken the constitution.

This, with a few drops of quinine and iron, will cure most cases produced by measles, scarlatina, small-pox or erysipelas, but the body should be kept warm and the skin clean.

The tinct. of iron, digitalis and jalapi may be given with great benefit thus:—

R.—Tinc. ferri chloridi
" digitalis
" jalapi aa., i oz.

S.—Thirty drops three times a day. This may be administered in a drach. of gin or in an infusion of buchu or senna if the bowels are not well open.

Where the dropsy is dependent upon and caused by secondary syphilis, I give the following:—

R.—Potassa iodidi, vi. drach.
Hydr. chl. corrosivæ, ii. grs.
Potassæ nitratis, i. oz.
Aquæ, i. pt.

S.—Give tablespoonful three times a day.

This, with generous diet and exercise in the open air, will usually relieve in a few weeks, and the change for the better may be seen in a few days.

If these cases are too feeble to bear the mercury, I give them cicutæ and extract of belladonna thus :—

R.—Potassæ iodidi. vi, drach.
Ext. cicutæ, xx. grs.
" belladonna, xx. grs.
Syrupi Sarsaparillæ, i. pt.

Tablespoonful three times a day two hours before each meal.

Before closing this piece I cannot refrain from mentioning the use of alkaloids of leontadin, leptandrin, podophillen, jalapin, hydrastin, xanthroxylin, alnuin, elaterin, thus:—

R.—Elaterin, $\frac{1}{16}$ gr.
Jalapin, $\frac{1}{4}$ gr.
Potassæ bitartratis, i. oz.

Give at once.

Which is spoken so lightly of by the Eclectic doctors. I believe they are beneficial and preferable to the old tinctures and extracts, and that they keep better in our Southern climate, are more easily carried in the saddle-bags, more easily taken by our patients, and these, together, are no ordinary advantages.

REPORT OF ISLAND CITY HOSPITAL.

Diseases treated from January 1st, 1866, to January 1st, 1867.

	ADMITTED.	DISCHARGED	DIED.	REMAINING.
Adenitis	2	1	..	1
Abscesses	5	4	..	1
Anasarca	4	..	2	2
Aseites	5	3	1	1
Anemia	2	1	..	1
Amenorrhea	1	1	..	..
Bronchitis, Acuta	3	3	..	..
" Chronica	4	3	..	1
Catarrhus	3	3	..	..
Constipatio	2	2	..	..
Cholera Epidemica	19	5	12	2
Diarrhœa Acuta	6	6	..	..
" Chronica	5	5	..	..
" Hemorhagie	6	5	1	..
Dysenteria Acuta	3	2	..	1
" Chronica	3	..	2	1
Delirium Tremens	4	4	..	..
Debiltas	4	2	1	1
Dysuria	1	1	..	..
Dysmenorrhœa	1	1	..	..
Dementia	2	..	..	2
Epilepsia	1	..	..	1
Epididymitis	1	1	..	..
Enebrietas	4	4	..	..
Erysipelas	1	1	..	..
Furunculus	4	4	..	..
Fistula in Ano	3	2	..	1
Fractura	8	6	..	2
Febris Communis	5	5	..	..
" Typhoides	6	5	..	1
" Congestiva	27	14	13	..
" Int. quotid	84	79	..	5
" " Tertiana	90	88	1	10
" Remittens	167	167	..	..
" Typho-malarial	1	1	..	..
" Typhus-icterodes	5	2	3	..
Gonnorrhœa	11	11	..	..
Hernia	2	2	..	..
Hepatitis	4	4	..	..
Hemicrania	1	1	..	..
Hemoptysis	1	1	..	..
Hysteria	2	2	..	..
Icterus	4	2	1	1
Lithiasis	1	1	..	..
Luxatio	2	2	..	..
Locomotor Ataxia	1	1	..	..
Mania	2	2	..	..
Morbus Plumbi	1	1	..	..
" Serpentis	1	1	..	..
Neuralgia	1	1	..	..
Nephretis	1	1	..	..
Ophthalmia	6	6	..	..
Odontalgia	1	1	..	..
Orchitis	2	2	..	..
Onychia	8	8	..	..
Otitis	1	1	..	..
Phlegmon	2	2	..	..
Pleuritis	1	1	..	..
Pneumonitis	7	2	4	4
Phthisis Pulmonal	10	3	2	2
Paronychia	4	4	..	..
Paraphymosis	1	..	..	1
Parturitio	1	1	..	..
Prolapsus Uteri	2	1	1	..
	499	486	44	39

REPORT OF ISLAND CITY HOSPITAL.

(CONTINUED.)

	ADMITTED.	DISCHARGED	DIED.	REMAINING.
Brought forward....	499	486	44	39
Ptyalismus	2	2	..	..
Paralysis	4	3	..	1
Peri-ostitis	1	1	..	..
Pleurodynia	2	2	..	..
Rubeola	25	24	1	..
Rheumatismus Act.	33	32	1	..
" Chronica	9	6	..	3
" Gonorrhœal	2	1	..	1
Synoistis	2	1	..	1
Syphilis Prim.	7	7	..	..
" Consec	26	22	1	3
Scrofula	1	1	..	..
Strictura Uretha	3	3	..	..
Ulcas Simp	15	15	..	5
" Syph	6	5	..	1
" Chancroid	1	1	..	..
Vulnus	1	1	..	..
" Incis	9	6	..	3
" Cont. vel. Lacerat.	21	18	1	2
" Sclopet.	6	3	2	..
Variola	16	10	6	..
Diseases not reported	82	..	..	..
	773	650	56	59

AGES.

From 1 to 10.	From 10 to 20.	From 20 to 30.	From 30 to 40.	From 40 to 50.	From 50 to 60.	From 60 to 70.	Not given.	Total.
13	75	421	180	63	16	5	3	7731

NATIVITY.

American	English	French.	Irish	Spanish	German	Other countries.	Sex.		Color.		Total.
							Male	Female	White	Black	
303	54	6	227	3	54	126	726	47	695	76	773

NUMBER OF ADMISSIONS FOR MONTH, 1866.

		Brought forward	448
January	68	July	75
February	48	August	104
March	88	September	106
April	35	October	78
May	38	November	67
June	59	December	57
	448		4796

Total treated, 773. Total died, 57. Remaining 1st Jan., 1867, 59. Rates per hundred, 6.9

Arranged by

R. H. HANNA, M.D.,

House Surgeon Island City Hospital.

Mortuary Report of the City of Galveston.

It will be seen, by a reference to the December number of this JOURNAL, that the number of deaths in the city were 513. Of these 382 were natives of America, and the remainder, 181, foreigners. That the greatest were during August, and the least in January. This report is very imperfect and only can be relied on as to number, as the diseases were written in the Sexton's book in every common name, and we have classified them according to the register used at Island City Hospital. This number of deaths occurred alone amongst the citizens, as no soldiers are reported in this list, but deaths from the Island City Hospital are included in this report. This hospital receives patients from the Custom House, (sailors); from the city of Galveston and from the Chief Justice of the county, (paupers and insane persons); from Foreign Consuls, the Freedmen's Bureau, and private patients. In this institution, it will be seen from the report, that there have been treated in hospital 829; of these 56 have died, being a ratio of 6.9 to number treated while if we take the number of deaths from the hospital from those who died in the city there will be left 448 which, to the population, would be *one* in 2.90 per hundred of citizens. The greatest number of admissions into hospital was in September (105), and the least in April (35). During the year we have had epidemics of rubeola, which caused the increase of patients. In January and in April we had variola, which prevented many from coming to the hospital, where quite a number were treated. In August and September we had cholera and yellow fever in the hospital, there being in the hospital during the month of August 13 cases and three deaths of yellow fever. There were from the sailors brought to hospital 7 cases; and four took it in hospital; one came from the city—Washington Hotel,—was a waiter; and one was a negro from New Orleans, sent to hospital from Mr. McCloskey's.

There were no cases reported in city, and only one case reported yellow fever in the Sexton's report. That case died from black vomit and was a patient in the *hospital* with consumption the time he was taken. We treated in hospital [illegible] cases of cholera; of these 12 died. There are reported in the Sexton's report 41 deaths besides the soldiers. This report is not accurate, and from the various sources of information I have estimated that we had about 300 cases of cholera in the city, including the soldiers, and from that number there have died 22 soldiers, and 12 from hospital, and in the city 65, making sum total of 99, or one in three taken, and one in about 150 inhabitants. Cholera was introduced into the city on the night of the 22d of July by soldiers from Heart's Island, and spread to the camps, and from camp to eedmen, from freedmen to citizens, so commenced in the heart of the city and spread to all parts, and finally disappeared in January.

Senators of the First Session XXXIX. Congress.

The following table, showing the physical characteristics of the present members of the U.S. Senate, was prepared in July, 1866, by Frank Cowan, Esq., with great care, from actual measurements made by himself. This table, with an able introductory article, and the Etymologies of the names of the Senators, alphabetically arranged, was published in Sutton's Reporter of January 14th, 1867 :—

TABLE OF THE PHYSICAL CHARACTERISTICS OF THE MEMBERS OF THE SENATE.

Prepared 1—10 July, 1866.

	HEIGHT.	WEIGHT.	CHEST.	HEAD.	BIRTH.
	Inches.	lbs.	*Inches.*	*Inches.*	
Anthony	71⅛	192	41	22	April 1, 1815.
Brown	67¼	119	33½	22¼	May 28, 1826.
Buckalew	69⅝	129	34	22½	Dec. 28,1821
Chandler	78⅜	208	41¼	22¾	Dec. 10, 1813.
Clark	72¼	154	35¼	23	Oct. 24, 1809.
Conness	66⅝	166	39	23	Oct. 6, 1822.
Cowan	75¼	186	40	22	Sept. 19, 1815.
Cragin	69⅜	177	39¼	23½	Feb. 3, 1821.
Cresswell	68⅜	201	41½	23¼	Nov. 18, 1828.
Davis	65⅜	127½	36	23	Sept. 10, 1801.
Dixon	70½	175	40	23½	Aug. 5, 1814.
Doolittle	70⅛	200	41	23¼	Jan. 3, 1815.
Edmunds	72⅞	143	35½	22¾	Feb. 1, 1828.
Fessenden	70	130	33½	22½	Oct. 16, 1806.
Foster	71½	140	33	23	Nov. 22, 1806.
Grimes	71⅜	161	37¼	24	Oct. 20, 1816.
Guthrie	74	220½	42½	22¾	Dec. 5, 1792.
Harris	73¼	219	42½	23	May 31, 1802.
Henderson	73	132½	35½	22½	Nov. 16, 1826.
Hendricks	69⅜	175	39¾	23½	Sept. 7, 1819.
Howard	69½	206	42¾	23½	July 10, 1805.
Howe	72⅞	163½	38	23½	Feb. 24, 1816.
Johnson	66⅞	170½	38½	23½	May 21, 1796.
Kirkwood	70¾	172	37½	22½	Dec. 20, 1813.
Lane, of Indiana	71½	142	34	21	Feb. 24, 1811.
Lane, of Kansas	71	140	48½	23	June 22, 1814.
McDougall	66⅜	134	37	23	Nov. 9, 1817.
Morgan	73⅜	202½	42	23	Feb. 8, 1811.
Morrill	68⅞	158	36½	22¾	May 3, 1818.
Nesmith	69⅝	200	41½	24	July 23, 1820.
Norton	67⅝	148	36	22	April 12, 1829.
Nye	69½	191½	42	23¼	June 10, 1815.
Poland	69⅞	163	38¼	22¾	Nov. 1, 1815.
Pomeroy	69	232	44	24	Jan 3, 1816.
Ramsey	70¾	211½	41	23	Sept. 8, 1815.
Riddle	69½	117	32¾	23	Nov. 26, 1817.

PHYSICAL CHARACTERISTICS.

(CONTINUED.)

	HEIGHT.	WEIGHT.	CHEST.	HEAD.	BIRTH.
	Inches.	lbs.	*Inches.*	*Inches.*	
Saulsbury...	71¾	183	38½	23	June 2, 1820.
Sherman	74¼	157	35	23	May 10, 1823.
Sprague	68⅝	145	34	22¼	Sept. 12, 1830.
Stewart	73⅜	187	40	23	August 9, 1827.
Sumner	75⅛	204½	39¾	23	Jan. 6, 1811.
Trumbull	70½	150	35¾	22	Oct. 12, 1813.
Van Winkle	67¾	234	43	24	Sept. 7, 1808.
Wade	68¾	185	41½	23	Oct. 27, 1800.
Willey	73	162½	38	22½	Oct., 18, 1811.
Williams	73	178	40½	32¾	March 26, 1823.
Wilson	70	180½	40¼	22¼	Feb. 16, 1812.
Wright					1791.
Yates	69½	153	36	23	Jan. 18, 1817.
					Yrs. *Mos.* *Dys.*
Averages	70⅝	171¼	38⅛	22⅝	51 11 14

NOTE.—The above measurements of height were taken with boots on—measurements of chest over vest but under coat.

It appears from this physical survey of the personnel of the U. S. Senate that the tallest member " is Mr. Cowan; the shortest, Mr. Davis; while fourteen of the forty are six feet in height; the heaviest, Mr. Van Winkle; the lightest, Mr. Riddle; while twelve weigh two hundred or more. The Senator with the largest chest, Mr. Pomeroy; the smallest, Mr. Riddle; while nineteen have chests measuring in circumference forty inches or more; the possessors of the largest heads are Messrs. Grimes, Nesmith, Pomeroy, and Van Winkle; the smallest, Mr. Lane, of Indiana; while thirty have heads measuring in circumference twenty-three inches or more; the oldest, Mr. Wright; the youngest Mr. Sprague; and thirty-one have lived for more than half a century."

The foregoing table shows that in all the points observed our Senators exceed the average of mankind in all parts of the world as well as the average of our own country. As legislative bodies in their selection bear a certain relationship to the masses of the people, so do their averages bear a relationship one to the other; but whether or not these averages are proportionate has not yet been ascertained. That is whether or not the higher and more select the body the more striking the relationship between it and the people from which it is selected. The investigation started by Mr. F. Cowan is novel and as yet has not been carried far enough nor contrasted with similar legislative bodies in other countries to make the deductions which more extensive investigations in this direction will enable us to do. Is it true that because the average of physical development of our Senators is greater than the average of their countrymen, that, therefore, they have greater mental and moral power?

That lineage and race stamp mental and moral characteristics and capacities as well as physical peculiarities upon individuals is a well recognized fact in the science of ethnology.

The lineage or nationalities deduced from the etymology of the names of the Senators differ slightly from those given by themselves, but the variation is so trifling as not to impair the law.

	English.	Scotch.	Welsh.	German.	Dutch.	French.	Irish.
Deduced from Etymology of names.	29	8	4	3	2	2	1
Ancestry as given by the Senators.*	23	8	3¾	¾	¾	2	4¾

NOTE.—Six not given.

The preponderance of Senators of English descent is very great. When the proportion of nationalities represented in our whole population is known the significance of these figures will be increased.

From the interesting and carefully prepared table of Mr. Frank Cowan it appears that the average "age of the Senators was on the 1st of July, 1866, 51 years, 11 months and 14 days."

The mean lifetime or average duration of life in America, as inferred from elaborate examinations of records of population and mortality in Massachusetts, and of other States from data worked up by Mr. E. B. Elliott, M.A., delegate from the American Statistical Association to the late International Statistical Congress at Berlin, Prussia, 1863, is about forty years; this does not differ essentially from the average in England and Wales, and in France, but is somewhat higher than in Prussia and certain other European countries.

The mean age of a generation in America considered as *stationary*, as derived from the same records, that is, between 32 and 33 years, and the mean future lifetime of such generation is also between 32 and 33 years.

The mean age and also the mean future lifetime of a generation of people in England are each nearly the same—that is, between 32 and 33 years.

During the working period of life, say from the age of 15 to 45, and also in early infancy, the rate of mortality appears to be somewhat greater in the United States than in England. During the remaining period—that is, childhood and advance years—it is less here. The rate of mortality among infants on the continent appears in general to exceed the American rates.

The average age of soldiers in the volunteer forces of the United States during the late civil war was from 23 to 26 years; that army, as would probably prove the case with all volunteer armies having been supplied and recruited mainly from the young.

Mr. Elliot has shown that the mortality of soldiers at specified ages of life in the army diminishes rapidly with advancing age, and in accordance with a very simple law—that is, that the differences of the numbers at different ages of life diminish very nearly by a geometrical progression.

The average ages of the solders in the British Army (not recruits) serving at home in 1860, was twenty-three years. The average age of European troops in India for ten years—from 1847 to 1857—was twenty-three and a half years.

The average age of soldiers, officers and men serving in the Prussian army in 1861 was twenty-three and a half years.

The average height of the Senators of the thirty-ninth Congress, according to the measurements of Mr. Cowan, is about seventy and one-half (70½) inches, (or five feet ten and a half inches); which is about two and a half inches (or 3⅝ per cent.) in excess of the average height of mankind.

The average height of men in general is probably about sixty-eight inches. The height of recruits to the late volunteer forces of the United States, according to Mr. Elliott's data, was from sixty-seven to sixty-eight inches. That of recruits to the Regular Army of the United States for a series of years prior to the late war appears to have been nearer sixty-nine (68.8) inches.

From the report of the Provost Marshal General of the United States we find that in the examination of 237,391, the average height barefooted was found to be nearly sixty-seven and a half inches.

While in forty-seven nationalites collected in the same report, the average of 343,764 examined, the average height was found to be sixty-six and three-quarter inches nearly.

That of recruits to the British army in the years of 1860 and 1861 was sixty-six and one-half (66½) inches. That of British soldiers (not recruits—but in general older and consequently somewhat taller than recruits), in 1846, was sixty eight and one-half (68.51) inches. That of French conscripts for a long series of years, sixty-five and one-fifth (65.21) United States inches. That of French soldiers sixty-five and three-fourths (65.77) United States inches. From that it appears that the French soldier is somewhat shorter than either the English or American; the two latter being nearly the same height.

The mean variation of the height of the American volunteers from the average height was about two inches; being the same in excess as in defect.

The average measurement about the chest of the Senators is 38½ inches, which exceeds somewhat that of men generally. The circumference of the chest (taken under the coat and vest) of United States volunteers of the late army of the Potomac was about thirty-five (35) inches. The mean variation of the measurements from the average circumference of these soldiers was one and two-third inches; and the same in excess as in defect.

The three States presenting the tallest average men, according to the Provost Marshal's report: Minnesota, sixty-seven inches and ninety-one hundredths; Kansas, sixty-seven and thirty-five hundredths; Kentucky, sixty-seven and thirty-four hundredths. The shortest, the District of Columbia, sixty-six inches; West Virginia, sixty-five inches and twenty-eight hundredths; and New Hampshire, sixty-five inches and twelve hundredths.

The average chest measurements, as given in the Provost Marshal General's report, thirty-five inches and sixty-one hundredths on respiration, and thirty-three and eleven hundredths of an inch on expiration. The same measurementscollected from forty-seven nationalities found in the same report is to be —on respiration—35.59; on expiration, 33.12.

The three States giving the largest average chest measurements on inspiration were Kentucky, (36.37) thirty-six inches and thirty-seven hundredths; Maine, (36.05) thirty-six inches and five hundredths; and Illinois, (36.16) thirty-six inches and sixteen hundredths. The smallest, Rhode Island, (33.00) inches; New Hampshire, (34.32) inches; and Massachusetts, (34.34) inches.

The weight of the Senators was about 171¼ pounds avoirdupois; that of soldiers in the army of the Potomac having been about 147¼ pounds, which probably differs but little from, although, perhaps, somewhat less than the average weight of Americans generally.

The weight of recruits, already mentioned, to the British army in 1860 and 1861 was nearly one hundred and thirty pounds, (129½), which is somewhat less than that of the American soldiers, but their ages were also less, consequently some such difference might be expected.

The average circumference of the heads of the Senators, taken a little lower than the hat is usually worn, is about twenty-two and five-sixths (22.83) inches; that of the U. S. volunteers above mentioned having been about twenty-two and one-fifth (22.2) inches. The measurements of the U.S. soldiers were taken about the frontal eminence, and the greatest projection of the occiput—largest measurement—the process not differing essentially from that adopted with the Senators. The excess of the measurement in case of Senators was about two-thirds of an inch.—*Medical Register of the District of Columbia*, 1867.

Relative Frequency of Particular Diseases in the Different Sections of the United States.

The medical profession have long been persuaded that certain diseases and pathological conditions existed in a greater ratio to the population in some States and sections of the Union than in others, but it is only recently that statistics of an extensive and trustworthy character upon these points have been collected in sufficient numbers to give scientific value to the fact.

The physical condition of the male population in 23 States, between the ages of 20 and 45 years, as shown by the records of the Provost Marshal General's office, comprising examinations of over 1,000,000 of drafted men, which have been tabulated by Surgeon J. H. Baxter, U.S.V., and published in the report of the Secretary of War, possess great interest not only to the statesman but to the medical profession. Whether the numbers examined, considering the comparatively few disqualifying conditions met with in some States, warrant the compiler in establishing all his averages and deductions, remain to be confirmed or disapproved by further investigation. At all events no facts comparable in extent and scope of inquiry regarding the physical condition of our population have ever been projected or compiled. A further and final report from materials in the same office is now in process of preparation, which will further illustrate the physical condition and health ratio of the male population of the middle period of life in the United States.

We conceive that a sketch based upon the report enumerating some of the more common diseases which disqualify from military service in the different sections of the United States with a comparative statement of the proportions and where the rates were highest and where lowest, may possess some interest to our readers.

It is a gratifying and interesting fact to Americans that exemptions from all disqualifying causes are in less ratio to the whole number drafted in the United States than they are in either France, Great Britain or Belgium.

In the United States exemptions were two hundred and fifty-seven (257.39) per thousand.

In France three hundred and eighteen (317.63.)

In Great Britain three hundred and seventeen (317.31.)

In Belgium three hundred and twenty-one (320.61.)

The following deductions and representations of the frequency of diseased conditions disqualifying from military duty, is based upon the examination of 605,045 men drafted at various times in the different States of the Union.

The diseases and pathological conditions here noticed are taken somewhat at random, or because of their frequency and general interest to the public and the profession.

Aneurisms of Arteries.—This condition caused 105 men to be exempted out of the whole number examined—that is 605,045, or .17 per thousand. The disease was not reported as met with among the drafted in either Rhode Island, Connecticut, District of Columbia, West Virginia, Iowa or Kansas, but was found as a disqualifying cause in all the other States. The three States where the rates of exemption from this cause were greatest were the following: in Maryland, upon an examination of 20,112 drafted men, the rate was .45 in the thousand; in Vermont, when 7,268 were examined, it was met with in the ratio of .41; and in Missouri, in an examination of 12,075, in the proportion of .33 in the thousand.

Stone in Bladder.—There were exempted from the whole number examined 72 men, or .12 in each thousand. It was found to be a disqualifying condition in the drafted men of all the States to a small extent except Vermont, Rhode Island, Connecticut, District of Columbia, West Virginia and Kansas. The three States in which the ratio of its occurrence was greatest were Missouri, where in the examination of 12,075 drafted men its ratio was .50 in each thousand. In Delaware, of 7,192 examined, at the rate of .42. And in Kentucky, in the examination of 18,816, at the ratio of .37 in the thousand.

Ano, Fistula in.—There were exempted from the whole number of drafted men examined 602, which is at the rate of .99 per thousand. This condition was found to exist more or less among the drafted in all the States except Kansas. The three States in which the rates of exemption were highest from it were Kentucky, where in the examination of 18,816 it was found as a disqualifying cause in the ratio of 2.39 in the thousand. In West Virginia, in the examination of 1,815, at the ratio of 2.20. And in Delaware, in the examination of 7,192, in the proportion of 1.95 in the thousand.

Bones, Chronic Diseases of.—There were exempted from the whole number of drafted men examined in the United States 2,296 from this cause, which is at the rate of 3.79 in the thousand. It was found to be a disqualifying disease prevalent more or less in all the States, and in the greatest ratio in the following three: in Maine, out of 23,564 examined, it prevailed at the rate of 7.26 in the thousand; in Wisconsin, where 23,457 were examined, its ratio was 6.99 per thousand; and in Connecticut, in the examination of 11,017, it disqualified at the rate of 5.62 in the thousand.

Chest, deficient size of.—The lowest standard being fixed at 29 inches, the failure of a sufficient development of chest exempted from the whole number of drafted men examined 2,049, or at the rate of 3.39 in the thousand. There were no exemptions from this cause in New Jersey, Maryland, District of Columbia, West Virginia, Kentucky, Ohio, Indiana, Illinois, Iowa, Missouri, Minnesota or Kansas. But the exemptions were particularly high in Massachusetts, where there were examined 36,380, and disabilities in the ratio of 17.51 per thousand; and Rhode Island, where 4,072 'examinations exempted 16.94 per thousand for the same cause.

Debility, permanent.—There were exempted from the whole number of drafted men examined, 17,289, under this head, which is at the rate of 28.57 in each thousand. Under the above head were classed all cases where there was a feeble, broken-down constitution, which could not be classed under any special disease. All the States have received exemptions under the head of debility. Its rate was lowest, however, in Kansas, Missouri and New Jersey. The three States in which the ratios of exemptions were highest were Vermont, where 7,268 examinations found the disability in the proportion of 48.84 in the thousand; in Massachusetts, 36,380 examined, in the ratio of 47.75 in the thousand; and Maine, in an examination of 23,564, the ratio was 45.92 in the thousand.

Deafness, decided.—There were exempted from this cause in the drafted men examined 2,722, or at the rate of 4.50 per thousand. Exemptions on account of this disease were granted in all the States except West Virginia. The ratio of disability from it was highest in the three following States: In Maryland, out of 20,112 examined, its disqualifying condition was at the rate of 7.66 per thousand examined; Minnesota, where 8,738 were examined, the average exemption from it was 6.87 in the thousand; and in Massachusetts, where 36,384 were examined, the rate of disqualification from this disease was 6.32 in the thousand.

Epilepsy.—There were exempted from the whole number examined of drafted men 3,851, which is a ratio to those examined of 6.36 in the thousand. Exemption in consequence of epilepsy was made in all the States, but was lowest in the following States:—New Jersey, where 26,113 were examined, and exemptions at the rate of 4.06 in each thousand made; in Kentucky, where there were examined 18,816, the proportion disqualified was 4.15 in the thousand. The three States in which exemptions from this cause rose highest were Connecticut, where 11,017 were examined and 9.89 in each thousand exempted from that cause; in Vermont, in an examination of 7,268, the exemptions were at the rate of 8.39 in the thousand; and in Wisconsin, in an examination of 23,457, the ratio of disqualification was 8.06 in the thousand.

Loss of Sight, partial in both eyes.—There were exempted from military service, of the drafted men examined, 1,404, which is at a ratio of 2.32 in each thousand. Exemptions from this cause were granted in all the States except the following two:—Rhode Island and Connecticut. The three States in which the ratio of exemption from this cause is highest:—Illinois, in which 22,512 were examined, and the disqualifications amounted to 6.66 in each thousand; in Vermont 7,268 were examined and the rate of exemptions 6.60 in the thousand; and in Winconsin, 23,457, the ratio of disqualification was 5.16 in the thousand.

Varicose Veins of Lower Extremities.—There were 4,632 exemptions among those drafted and examined in consequence of this condition, which was at at the ratio of 7.66 in the thousand. The State in which the lowest rate of exemption was granted was West Virginia, where 1,815 were examined and the disqualifications found to be 2.22 in each thousand. The two States in which the rate of disability from this cause was highest were Wisconsin, in which 23,457 were examined, and the rate exempted 16.80 in each thousand. And in Maine, where 28,564, the exemptions were at the rate of 15.19 in the thousand examined.

Club Feet.—There were exempted from this cause of the whole number of drafted men examined 720, which is at the rate of 1.19 in each thousand.

There are some exemptions from this cause in all the States. The three in which the exemptions from this cause are highest are the following:—In Minnesota, where 8,738, the disqualification was found to be at the rate of 3.53 in the thousand; Massachusetts, where 36,380 were examined, the ratio was 2.39 in the thousand; and in Rhode Island the examinations were upon 4,072 drafted men, the disqualification was at the rate of 2.21 in the thousand.

Hernia, Inguinal.—There were exempted from the whole number of drafted men examined from this cause 13,994, which is at the rate of 23 13 in each thousand examined. Vermont obtained the lowest proportional exemption from this condition, wherein an examination of 7,268 the average was 2.48 in the thousand. The two States in which the rates of exemption are highest were Minnesota, where, in the examination of 8,738, the rate of disqualification was 41.08 in each thousand; and in Iowa, where 6,846 were examined, the rate was 35.19 in the thousand.

Hemorrhoids.—There were exempted from the whole number of drafted men examined 2,203 on account of this condition, which was at the rate of 3.64 in each thousand. Exemptions are credited to all the States from this disease except Kansas. The three States presenting the highest ratio of exemption from this cause were Illinois, where in the examination of 22,512 the ratio of disqualification was found to be 6.04 in each thousand; in Missouri, in an examination of 12,075, the exemptions average 5.55 in each thousand; and in Iowa, in the examination of 6,846, the ratio was 5.29 in the thousand.

Imbecility.—There were exempted from all the drafted men examined 1,817 from this cause, which was at the rate of 3.09 in the thousand. Kansas is the only State in which there are no exceptions on account of this condition. In Missouri the rate was the lowest, being in 12,075 examined at the rate of .58 in the thousand. The rate of exemptions was highest in the two following States:—Rhode Island, 4,072, the rate of exemptions was 9.83 in the thousand; and in New Hampshire, where there were 10,389 examined, the disqualification from this cause was at the rate of 8.28 in the thousand.

Insanity.—There were exempted from all the drafted men examined 747, which is in a ratio of 1.23 in the thousand. The lowest rate of exemptions from this cause was in Delaware and Missouri. In the former, in 7,192 examined, the rate was .14 in the thousand, and in the second in an examination of 12,075, at the rate of .25 in the thousand. The three States with the highest rates were:—New Hampshire, where 10,389 were examined and disqualifications from this cause in the ratio 3.56 in each thousand; Rhode Island, in the examination of 4,072, the exemption was 2.94 in the thousand. And in Maine, in the examination of 23,564, the rate was 2.29 in the thousand.

Organic Diseases of Internal Organs.—There were 18,634 drafted men exempted from military duty on examination from this cause, which is at the rate of 30.80 in each thousand. The lowest rate of exemption from this cause is accorded to Kansas, which, in an examination of 1,001 the rate of disqualification was found to be 9.99 in the thousand. The next lowest was Iowa, where 6,846 were examined and the rate of exemptions found to be 12.27 in the thousand. The three States in which the exemptions from this source were highest in Maine, where, in the examination of 23,564, the ratio was found to be 62.47 in the thousand; Massachusetts, in an examination of 36,380, exemptions were at the rate of 53.63 in the thousand; and Rhode Island, where 4,072 were examined, the average of 52.80 in the thousand exempted.

Neuralgia.—This condition disqualified 117 drafted men on the examination, which is at the rate of .19 in the thousand. No exemptions were granted for this condition in any of the following States:—Rhode Island, New Jersey, Delaware, District of Columbia, West Virginia, Kentucky, Ohio, Indiana, Illinois, Iowa, Missouri, Minnesota, or Kansas. The three States where the exemptions were largest were New Hampshire, where, in the examination of 10,389, it was found to be at the rate of .77 in each thousand; Massachusetts, in 36,380 examined, .60 in each thousand; and New York, where 115,668 were examined .33 in the thousand.

Otorrhœa, Chronic Purulent.—There were exempted from this cause, 901 drafted men, which is at the rate of 1.49 in the thousand examined in the United States. Kentucky was the lowest in the scale of exemptions from this disease, where, in the examination of 18,816, exemptions were found to average .37 in the thousand. The three States having the highest average of this disease were Maine, where, in 23,564 examinations, it was found to prevail at the rate of 2.84 in the thousand; Massachusetts, where 36,380 were examined, it disqualified at the rate of 2.17 in the thousand; and in Delaware the rate was found on examination of 7,192 to be 2.09 in the thousand.

Paralysis.—There were exempted from military duty on examination 541 drafted men on account of this condition, which is in the rate of .99 in the thousand. The lowest average was found to be in the District of Columbia and Iowa. In the former, out of the 8,384 examined, it was found to be .12 in the thousand; and in the latter, in an examination of 6,846, to be .15 in the thousand. In the three following States this disease disqualified in the greatest ratio:—New Hampshire, in 10,389 examined, it was found at the rate of 1.73 in the thousand; in Maine, where 23,564 were examined it prevailed at the rate of 1.53 in the thousand; and New York in the examination of 115,668, it disqualified at the rate of 1.47 in the thousand.

Chronic Rheumatism.—There were 2,736 exempted from this disease in the draft of the United States, which was at the rate of 4.52 in the thousand. New Jersey had the lowest rate of exemptions from this cause, where out of an examination of 26,112, it was found to disqualify from military service at the rate of 1.07 in the thousand. In the following three States the exemption from it was in the highest ratio:—Delaware, in which 7,192 were examined, the average rate of disqualification from this disease was found to be 10.29 in the thousand; Minnesota, where 8,738 were examined, the ratio of exemption in the thousand was 8.01; and Massachusetts, where 36,380 were examined, this disease disqualified at the rate of 7.70 in the thousand.

Skin, Inveterate and Exterior Diseases of.—There were 891 exemptions of drafted men from this cause from military service in the United States, which is at the rate of 1.47 in the thousand. There was no case of exemption from this cause in Kansas. The State having the lowest rate is Indiana, where in an examination of 35,621 it was found in the ratio of .56 in the thousand. The three States where the ratios ruled highest were the following:—Rhode Island, where, in the examination of 4,072, it was found to be 4.17 in the thousand; Massachusetts, where 36,380 were examined, it disqualified at the rate of 3.71 in the thousand; and Iowa, where 6,846 were examined, exemptions were 2.75 in the thousand.

Scrofula.—There were exempted from military service in the United States on the different drafts 1,718 on account of this condition, which was at the rate of 2.84 in the thousand. Rhode Island seems from the figures presented to have been the lowest in the scale of exemptions, where, out of an examination of 4,072 it disqualified only at the rate of .24 in the thousand. In the following three States the rate of exemptions was the highest:—New Hampshire, in an examination of 10,389, it was found to disqualify at the rate of 7.03 in the thousand; Maine, where 23,564 were examined, at the rate of 5.39 in the thousand; and Massachusetts, in an examination of 36,380, it exempted at the rate of 5.14 in the thousand.

Syphilis, Secondary.—There were exempted from this cause in the different drafts 9,003, which was the rate of 1.49 in the thousand examined. But two States are without exemptions from this cause, viz.: Iowa and Kansas. The following States were the lowest:—New Hampshire, in the examination of her 10,389 drafted, the exemption was .10 in the thousand; Minnesota, in an examination of 8,738, it was found to disqualify at the rate of .23 in the thousand; and Delaware in an examination of 7,192, at the rate of .28 in the thousand. The three States with the highest exemptions were the following: Rhode Island, where 4,072 were examined, and the rate of disqualification from this cause was 4.67 in the thousand; in the District of Columbia, where 8,384 examinations took place, the rate of exemption was 4.65 in the thousand; in Massachusetts, where 36,380 were examined, and the rate of exemption found to be 2.61 in the thousand.

Sarcocele, Confirmed and Malignant.—There were 1,604 exemptions from military service in the United States, which is in the ratio of 2.63 in the thousand, from this cause. This, as a disqualifying condition, was found to be less frequent in the District of Columbia than any where that the draft was enforced. In an examination of 8,384, exemptions were at the rate of .48 in the thousand. The two following are the States where it was found in the highest ratio:—Massachusetts, in the examination of her 36,380 drafted men, the rate was found to be 9.57 in the thousand. Maine, in the examination of 23,564, it was at the rate 4.58 in the thousand.

Eyes Serius, Permanent Disease of.—There were exempted from military service among all the men drafted and examined 3,579, which was at the rate of 5.92 in the thousand. The three States in which the per centage of exemptions from this cause was lowest, were West Virginia, where 1,815 were examined, the ratio of exemptions was found to be 1.10 in the thousand; in Ohio, in the examination of 41,176, the ratio of disabilities from this cause 1.14 in the thousand. The rate of exemption from this cause was highest in the three following States; in Rhode Island, where 4,072 were examined, the disability averaged 14.48 in the thousand; in Massachusetts, where 36,380 were examined, the ratio was found to be 13.83 in the thousand; and in Connecticut, where 11,017 were examined, it was found to disqualify at the rate of 11.71 in the thousand.

Teeth, Loss of.—There were exempted from military duty of the drafted men examined 10,810, or at the rate of 17.87 in the thousand. The average of exemptions from this cause was found to be lowest in the two following States:—West Virginia, where 1,815 were examined, the rate of exemption was 7.16 in the thousand; and in Kentucky, in an examination 18,816, the average was 7.67 in the thousand. In the following three States the exemptions ranged highest:—in Massachusetts, in the the examination of 36,380, the average number disqualified in each thousand was 34.55; in Connecticut, where 11,017 were examined, the average number exempted was 27.68 in each thousand; and in Pennsylvania, where 144,724 drafted men were examined, this condition prevailed to an average that disqualified from military duty at the rate of 20.77 in the thousand.

Intemperance, Habitual and Confirmed.—There were exempted from military duty, of the men drafted in the different States, 66 persons, which is at the rate of .11 in the thousand. I suppose the policy of the examining board was not to exempt from this cause unless the condition of the individual left no hope of performing the required service. In the following States there were no exemptions from this cause:—Vermont, New Jersey, District of Columbia, West Virginia, Kentucky, Ohio, Indiana, Illinois, Iowa, Missouri, Michigan, Wisconsin, Minnesota, Kansas. The three States in which the per centage of exemptions from this cause seem to be highest:—Rhode Island, where, in an examination of 4,072, the rate of exemption from this cause was at the rate of .98 in the thousand; Connecticut, where 11,017 were examined, it was found to disqualify at the rate of .54 in the thousand; and in New Hampshire, where 10,398 were examined, it was found to disqualify at the rate of .29 in the thousand.

Tuberculosis Developed.—There were exempted from this cause 6,764 drafted men, which is at the rate of 11.18 in the thousand. It appears Rhode Island is the only State in which exemptions from this cause did not take place. The two States where the average was lowest was Michigan, where 17,755 were examined, and the rate of exemption 2.42 in the thousand; and West Virginia, where 1,815 were examined, with a ratio of 3.86 in the thousand. The two States where the rates are set down as disqualifying the largest ratio, are Maryland and Missouri. In the former, in an examination of 20,112 drafted men, the rate of disqualification from this disease was 27.29 in the thousand. In Missouri, in 12,075 examinations, the rate was found to be 19.50 in the thousand. The results obtained by examination of recruits, as regards the relative frequency of tuberculosis in the different sections of the country, is entirely at variance with our impressions previously formed upon the subject. This is also to be said of other diseases here referred to, but we do not propose to comment upon the foregoing facts at this time.—*Medical Register District Columbia*, 1867.

I.—The Sphygmograph.*

BY MEREDITH CLYMER, M. D.

The value of the sphygmograph, for the purpose of physiological research, has been for some years universally acknowledged. Its application to the investigation of disease is only beginning to attract the notice of the Profession. By it a permanent record of the pulse form is photographed, as it were, by a series of zigzags, written upon a sheet of paper. It tells, by means of a beautiful and simple mechanism, the frequency and regularity of the pulsations of any vessel to which it may be applied, and enables us to see, at a glance, peculiarities and differences in the series, or in any single pulsation, so minute that the most delicate and practiced finger would fail to recognize them. The sphygmograph was invented and named by Vierordt, as an aid in the study of the physiology of the circulation; but the instrument now used is one materially modified and improved, almost re-made, by Dr. E. J. Marey, of Paris, so distinguished for his admirable experimental researches upon the physiology of the circulation, and their practical application to clinical medicine.

Marey's instrument may be briefly described as consisting of a steel spring, whose free end, covered with a convex plate of ivory, rests upon the artery to be examined, and by virtue of its elasticity exerts a certain degree of pressure upon the vessel. Each pulsation slightly raises the spring, at its distal extremity, and the multiplication of the movement is obtained by means of a very light lever, which moves upon a pivot, the rise of the spring being transmitted to the lever, very near to its centre of motion, by a bar of metal, bent at right-angles, so as to form two limbs of unequal length, the horizontal one being two-thirds longer than the vertical one, which latter terminates in a point. The vertical arm of the bar is pierced by a screw, which, when it acts, establishes a connection between the spring and the bar, and the movements of the former are transmitted to the latter, and through its vertical arm to the lever. To insure the transmission of the movement, the short arm of the bar must be in contact with the under surface of the lever, and this is effected by means of the screw, which also regulates the interval between the point of the short arm and the under surface of the lever, as well as the amount of pressure exercised upon the artery by the spring. The lever carries at its free extremity a little pen, which, filled with ink, registers its movements upon the paper, covering a plate, and this plate is moved, at a uniform rate, forwards by means of watch work, placed beneath in the case. The passage of the plate takes ten seconds; the watch-work is wound up by a button, and a small regulator starts and stops the plate. The instrument is applied to the arm, when the radial pulse is to be explored, by elastic bands, a pad being previously placed on the under surface of the limb for the greater comfort of the patient, and to take off the pressure of the bands.

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*Physiologie Medicale de la Circulation du Sang. Par le Dr. E. J. Marey. Paris, 1863. On the use of the Sphygmograph. By B. W. Foster, M.D., London, 1866. On the Application of Physical Methods to the Exploration of the Movements of the Heart and Pulse in Disease. By J. Burdon-Sanderson, M.D., and Francis E. Anstie, M.D. The Lancet, Nov. 1866.

The tracings of the pulse-form are a literal transcript of physiological facts, and these should be understood before the record can be read aright, and to prevent error the mechanics of the circulation must be known. The researches of E. H. Weber (1833) established that the pulse took its origin in the sudden stretching of the aorta by the pressure of the blood injected into it by the contracting ventricle, and that it is propagated along the arteries in the form of a wave. It set aside, by direct experimental observations, the tidal theory of Bichat, who held that all pulses were synchronic—which was subsequently shown by physiologists to be incorrect—and proved that there was an appreciable interval between the contraction of the ventricle and a pulsation in any artery, and that it was in proportion to the distance of the part explored from the heart. Vierordt, Chauveau, and Marey mainly developed the physiological facts growing out of Weber's theory. The aorta in man cannot be directly examined, but it may be assumed that the wave or pulse of the carotid or subclavian arteries, from their size and proximity to the aorta, is practically identical with the primal wave. A pulse-trace, as recorded by the sphygmograph, is made up of a series of curves, each curve corresponding to a complete cardiac revolution, and is called the *pulsation*, which is composed of three parts, viz.:—the line of *ascent*, the *summit*, and the line of *descent.* The first part coincides with the period the heart and aorta are in communication—the systolic period—the beginning of which is marked by a sudden, upward jerk of the lever, indicated in the tracing by a nearly vertical line; then comes a slight fall followed by a slighter upward jerk, tokening the closure of the valves, and arrest of the communication, and marking the second part or *summit ;* the lever remains stationary for an instant, and then suddenly falls—the third part, or *descent.* The line of *ascent*, caused by the flow of blood into the vessels after each cardiac systole, tells, by its form, the manner in which the blood enters the aorta. The more rapid the efflux the more vertical will be the line of ascent. When the blood enters slowly, from any hindrance, the line of ascent is oblique, and sometimes of a curved form. In certain disorders of the heart and vessels, the line of ascent is of a mixed form, the first part of the trace being vertical and the rest curved. When, under certain conditions, the mass of the blood in the ventricle during contraction is thrown into rapid vibrations, the ascending pulse-curve is interrupted by a series of notches, each corresponding to a vibration. The summit of the trace marks the moment when the afflux and efflux are exactly equal, and it may be so short as to be a mere mathematical point between the lines of ascent and descent, or of such duration as to make the summit a horizontal line of some length, or it may be formed by an ascending or descending plane, according as the afflux is greater than the efflux, and the reverse. A little hooked-poiut sometimes precedes the summit, and becomes a valuable element of diagnosis. The line of descent, corresponding to diminished pressure in the arterial system, marks, by its degrees of obliquity, the rapidity of the fall in the pressure, and indicates the facility of the passage of the blood. Its form may vary very much, being sometimes purely oblique, occasionally with a curve whose convexity is upwards, or it may have one or more undulations—this last character indicating what is called *dicrotism ;* which term it has been proposed to limit in sphygmography to the undulations seen in the line of descent, to distinguish them from those met with at times in the line of ascent, which have a different diagnostic signification. The degree of abruptness in the line of descent depends on the amount of aortic regurgitation, and the swiftness and completeness of closure of the sigmoid valves.

In the great vessels, pulsation is produced by a simultaneous increase of tension and acceleration of movement. In the more distant arteries, these two effects are no longer coincident, for, though transmitted, they tend to separate more and more from each other the further they are noticed from the heart.

With regard to the radial pulse:—(1.) The propagation of the systolic acceleration, if it happens, causes a rapid expansion of the artery, which is synchronous with the ventricular systole, and is immediately followed by collapse. (2.) The propagation of the systolic pressure-wave gives rise to a gradual expansion of the artery, and follows the systole after a variable interval. (3.) When the resistance due to the mean arterial tension is considerable, the acceleration extends only to the great vessels, so that its effects at the wrist are imperceptible, and the pulse tracings are wave-like. When arterial tension is lessened, the elevation of the lever from systolic acceleration is abrupt, but of short duration.

Degeneration of the arteries, so common in old age, is indicated by certain forms of the pulse-trace The chief characters of the senile pulse are:—great amplitude of the trace; a vertical and sometimes broken line of ascent; a sudden fall of the first part of the descent, and an absence of dicrotism. These peculiarities are due to dilatation of the vessels, their lessened elasticity, and to increased energy of the ventricle. They are found in a less degree, sometimes, at an earlier period of life, and betoken the presence of arterial change. The rounded summit and decreased dicrotism are, when well marked, the first signs of diminished arterial elasticity, and the beginning of arterial change.

The pulse-trace in *aneurisms* shows the modifications in the movement of the blood produced by the diseased condition. An aneurism of the subclavian artery was detected by means of the sphygmograph, when it was impossible to make out the diagnosis by the usual methods of investigation, (Burdon-Sanderson and Anstie—The Lancet, January 20, 1866.) These modifications depend on the site of the tumor, its size relatively to that of the diseased artery, and the elasticity of its walls to properly study the pulse-traces. Marey divides aneurisms into two classes:—(1.) When their site is such that the pulse can be explored on the involved vessel at some point below the tumor. (2.) Those of the aorta. 1.—The pulsation of an *implicated artery* below the tumor is weakened and generally retarded, the sac modifying the movement of the fluid. The sphygmograph shows that the modifications of the pulse are both in its form and its force; the movement of the blood in the vessel is more like that in the smaller arterial branches in a natural state. The vertical line of ascent disappears, and often approaches in length that of descent. 2.—In aneurisms of the aorta the indications given by the pulse-traces are less marked. Marey has found the force of the pulse generally but little decreased. Changes in the dicrotism may be present in one or both radial pulses, and is occasionally a sign of value. The most valuable sign is a constant dissimilarity in the pulse-traces of the radial arteries, which is shown either by a slight difference in the dicrotism only, or by evident difference in the form.

In Valvular Diseases of the Heart the sphygmograph increases the accuracy of the diagnosis. The pulse trace in *aortic obstruction* shows an obliquity of the line of ascent, indicating a prolonged ventricular systole, and the gradual entrance of the blood into the aorta. Insufficiency of the sigmoid valves—*aortic regurgitation*—produces pulse-traces of a striking character. There is a great amplitude, due, according to Marey, to the feeble tension of the artery, in consequence of regurgitation during the ventricular diastole; the vertical line of ascent, making the sudden ventricular contraction, ends in an acute, pointed process, indicating that the lever, from its sudden and accelerated elevation, has for a brief interval lost its connection with the arterial movement; the summit is often very short, but may be a curved or horizontal line, as in cases where there is narrowing of the aortic orifice, or the passage of the blood into the vessels is from any cause hindered.

The very irregular pulse of *Mitral Regurgitation* is characteristically recorded by the sphygmograph. If there is coincident narrowing of the auriculo-ventricular orifice, the irregularity of the pulse-trace of pure mitral regurgitation is less.

The pulse-form in acute diseases is now being intelligently and carefully investigated by several competent observers—notably by Drs. Burdon-Sanderson and Anstie, of London. The results yet known are encouraging, and promise that the sphygmograph will become a received instrument of clinical diagnosis and a valuable aid in prognosis. These researches have not, however, reached such a development, especially as regards the true interpretation of the sign language, which the instrument writes with the accuracy of the electric teleraph, to warrant absolute rules being yet laid down.

The constancy of form in the tracings from the same individual at different times, under the same physiological conditions, is remarkable, shows the trustiness of the sphygmographic record, and, as Dr. Burdon-Sanderson remarks, "however imperfectly we may as yet be able to interpret it, we may confidently hope that it will some day help us to arrive at a more perfect knowledge of those individual peculiarities of healthy constitution which we now neglect for the want of the means of appreciating them."—*Medical Record.*

Trismus Nascentium.

(*By* GREENSVILLE DOWELL, M.D., *Columbia*, *Brasoria County*, *Texas*.)

My attention was first drawn to the pathology of trismus nascentium by the paper of Dr. Sims, formerly of Montgomery, Ala., now of New York, published in this journal. (See Nos. for April, 1846, July and Oct., 1848.) That writer adduced a number of cases to show that the disease resulted from compression of the brain caused by the overlapping of the bones of the cranium. An opportunity was soon after afforded me, in Panola county, Miss., where I then practiced, of testing the correctness of these views. I was called to a case on the plantation of Mrs. H., in which there was evidently displacement of the occiput, and I immediately determined to try Dr. Sim's practice. I placed the child on its side on a pillow, and changed it from one side to the other. I directed its bowels to be moved with sweet oil, and in a few hours the spasms subsided, the child could nurse, and in a very short time it was quite well, and is, I believe, now living. This was the first case of the disease I had ever seen recover; and Mrs. H., who was a very intelligent lady, the widow of a physician who had practiced many years in Georgia, told me that this was the first case she had ever seen recover, and that she had lost many negro children with the disease, both in Georgia and Mississippi. The disease was quite common amongst the blacks in Panola county, but I never saw a case amongst the whites while I practiced in that section. The success in this case quite elated me. In the next I was called to I adopted the same treatment, but not could discover that there was any displacement of the occiput or parietal bones. The treatment failed, and I made a post-mortem examination, but could not discover any organic or mechanical injury about the head. The umbilicus was well healed, but there was dark blood in the umbilical vein, and a yellowness around the navel. The liver was congested, and the gall-bladder filled with dark thick bile. The bowels were empty, and apparently entirely healthy.

This case led me to thnik that the primary cause of the disease was in the umbilicus, and brought on by congestion of the liver, induced by coagulation of the blood in the umbilical vein. Several times since I have found these changes in post-mortem examinations, and am free to declare that the majority of the cases I have met with have been of this character. The only case in a white child I have seen in this county was of this character, and as the case is an interesting one I shall give the particulars of it:—

Mrs. S., the wife of an overseer, was taken very suddenly in labor, and as I lived some nine miles distant, they sent for a very intelligent negro midwife, but the child was born before she got there; the placenta was thrown off with the child. She cut the cord about six inches from the umbilicus, and wrapped it with a tape string up to the umbilicus. The umbilical cord came off at the usual time. About the eighth day the child refused to nurse, and spasms came on, and with each spasm there was hemorrhage from the umbilicus. They sent immediately for me. I tried to stop the hemorrhage with nitrate of silver, but to no effect. I then put two needles through the base of the umbilicus, and a ligature beneath them. This stopped the hemorrhage for a while, but it returned in about four or five hours. By tightening the ligatures the hemorrhage was kept down, but the spasms continued to return, and finally the child starved to death, though the spasms were sufficient to kill it.

Other cases which have come under my observation I have thought were brought on from irritation of the meconium; the children of this class not having proper attention. The bowels in these became distended, and when they were moved by medicine, the discharges were frequent and too watery. Finally, the child would not suck, and spasms followed. Another cause, it appears to me, has been the neglect, on the part of the nurses, of cleansing the body and head of the child at birth. This becomes a sources of irritation, ultimately producing congestion of the brain and spasms. Some of our physicians think that there is a hereditary or constitutional tendency in the children of some mothers to take on this disease. We know that some mothers lose all their children with it. So much imbued are many of our planters with this notion, that often they tell the midwife if they can save such children they may have them. All such cases that have come under my care have been saved by the plan I shall presently describe for their treatment. With all my past experience and observation, I have come to the following conclusion:—

1st.—That the disease is produced most frequently from improper management of the cord, and congestion of the blood in the umbilical vein; from this vein congestion spreads to the liver, and it becomes swollen and filled with dark blood, and the secretion of bile is entirely arrested.

2.—The next most frequent cause is the displacement of the occipital bones in parturition. We may always look for this cause in protracted labors.

3d.—The retention of the meconium, and want of proper cleansing of the skin when the child is first dressed.

4th—And lastly, it may be produced from any cause that will produce tetanus in old persons. Cold, exposure to drafts of cold air; foul odors, such as emanate from old bed-clothes, saturated with urine and besmeared with feces, which are often to be found in our negro cabins, when the masters are not particular to make the tenants wash and clean out their houses. Negroes often go to sleep and let their children fall or overlay them, which also brings on the disease. I believe I have seen it produced from all these causes.

The symptoms vary but little in this disease. Let it be produced from any one of these causes, the first symptom is want of power in the child to nurse, or a disinclination, most generally; they will feed from a spoon when they cannot suck.

It is almost sure to come on between the fifth and twelfth day after birth, generally about the ninth day; though it may occur any time within six months, and some think even within two years. I have not known any to occur at so late a period, and but one or two cases after thirty days. I always consider the child safe from the effects of mismanagement of the umbilical cord, if they live three weeks (Dr. Morris says fifteen days), never having seen a case which appeared to me to have originated after that time, from this cause. Those that occur from displacement of the occiput may occur at any time within two years, as many negro children are left for three or four hours in one position, generally on the back. Often all the hair is rubbed off, and the body is confined in a small cradle with scarcely room to turn over. These boxes are very objectionable, and I always endeavor to prevail upon the parties to entirely banish them. I much prefer that the child should be laid on the floor, with only a blanket, than placed in the cradles in use by most of our negroes.

The spasms are various; sometimes only partial and scarcely perceptible, and at other times general and very severe. The abdominal muscles are contracted in nearly all cases during the spasms; in some cases one side alone appeared to be affected, and the muscles of that side of the face drew the mouth to one side in a most frightful manner. In most cases the hands are clenched all the time. The patients cry but little, but appear to suffer much when moved or handled.

Fever is occasionally, though not usually present; its occurrence indeed is the exception to the general rule. The tongue is generally coated with a white or brown fur.

When called to one of these cases, my first object is to ascertain from which of the causes enumerated the attack had originated. I begin my investigations with the head, as described by Dr. Sims, by examining all the sutures, to see if there is any overlapping, or if any of the bones are movable. If pressure on any one of them produces uneasiness or spasms, I press gently on the fontanelle, and if the disease is produced from the misplacement of any of the bones of the cranium, it will give the patient pain, and often produce a spasm. I press my finger gently on all the sutures, to see if the two edges meet, and that the head is smooth, and no trombus or any perceptible misplacement. Should there be any, I immediately place them according to Dr. Sim's plan—on a soft bed; if the occiput is at fault, *on the side;* if the parietal, *on the back.* I direct them to be held to the breast on a pillow; do not allow the arm to be put under their head, as they are usually nursed; order them changed at least every two or three hours, whether asleep or awake. I have the bowels moved with sweet oil, and have them fed with a spoon sufficiently only to keep up their strength.

In those cases occurring from the umbilicus, I would rub the abdomen with an ointment of the iodide of mercury, gr. x. to j. drach. of lard, and give from one to five grains of calomel internally. I frequently have tried to control the spasms with a watery solution of assafœtida, made by pouring warm water on chipped assafœtida. This seemed to me to do good in some instances, and had a better effect than anything I have yet tried. The preparations of opium do no good; but stupefy the patient and hasten its death. I use warm mustard baths in all cases, and nearly always with present relief to the spasms. I have blistered the umbilicus, but with no benefit.

Where the disease originates from any other cause, it should be found out and removed. If the skin is not entirely clean and all dandruff gotten out of the hair, this should be done immediately, and the bowels moved with sweet oil or the calomel as in the last case. When they have fever, I never fail to give quinia, and generally with improvement of symptoms. I have cured a well marked sore with calomel followed by quinia and assafœtida and mustard bath. I have several times blistered the spine; but to no effect. In nearly all cases I have used some liniment to the spine—generally sweet oil, ammonia, and turpentine—not strong enough to blister, as this interferes with the mustard bath, in which I have more confidence.

It is the general opinion of our physicians that after the spasms commence nothing can be done, and in that opinion I must concur. I have seen but three cases recover under any and all the plans hitherto tried—the case related, and two others cured by the plan suggested above. I have relieved many cases, after they had refused to suck, by this plan, and I can speak of its efficacy with confidence. Our physicians are not often called until the case is hopeless, but I have lived nearly all my professional life on a plantation where there were from thirty to one hundred and fifty negroes, who were especially under my care, and it was my instruction to the lying-in women, as soon as their children would not nurse, to bring them to me. In that way I have cured many. Some with slight twitchings of the muscles have recovered without any trouble, by being put in a mustard bath, washed clean, and put in a clean and well ventilated cabin. I have tried ether and chloroform, but with no success.

Our main reliance is in prevention. Nearly every physician has his own method of treatment, and I will give mine, which I respectfully submit as appearing to me to be the most efficacious.

My first object is to have the house of the patient and all the bed-clothes clean, and when this has not been previously attended to, I have it done as soon as convenient. Not more than four persons should be allowed to be in a cabin, and I would prefer only the nurse and husband to be there. As soon as the child is born and it has breathed, I tie two ligatures around the cord, the first at such a distance from the umbilicus—*say about half an inch*—as to give me a chance, should I not tie it tight enough, to put another between this and the umbilicus. The other ligature I put about an inch from the first, and cut the cord between them.

It has been the custom with our negro midwives, especially the Africans. to tie the cord about four or five inches long, and coil it around on the abdomen. Most of them cut it about two inches long, so far as I know. And here I will mention a fact told me by Dr. S. A. Towsy :—

Several years ago he was employed to attend to the plantation of negroes now owned by Col. S., of this county, who are mostly Africans brought to this county before annexation. He had been told that they lost all of their young children with this disease, and that the owner's intention was to see if he could not save them. That year there were born on the place thirteen children, and he attended eleven. The eleven he attended lived and did well; and the other two died with this disease. He saw one of them with the disease, and, upon examination, he found that the cord had been left some ten or eleven inches long, and was wound around in a coil upon the abdomen. There was tenderness over the liver and bowels, indicating that the disease originated from that source. He inquired of the midwife if that was the way she dressed all her children. and she said it was, and that they all died in the same way, and about the ninth day.

After cutting the cord, I have the child put in a tub of warm water, washed perfectly clean, head and body, and then I cut out a hole in a piece of soft linen and wrap the end of the cord in burnt cotton, and fold the linen over the cord and cotton, and then put the middle of the bandage over this, and pin it over the back. I have the bandage tight enough to prevent its slipping or moving about, but not to give pain. In this situation I recommend it to be kept for five days, noticing the bandage to see if there is any hemorrhage. I then direct the child to be carefully nursed, and not be left too long in one situation; the head to be kept cool, and without any caps.

Under this plan I have not lost a single case that I have had special charge of. This is the experience of all those who have followed this plan or a similar one. A practitioner of our county gives half grain doses of of calomel from birth, twice or three times a day, for nine days. This I think very objectionable, and, though calomel is good, where there is fever and a derangement of the digestive organs it should be given with judgment and caution. But I think this plan itself would often bring on the disease; and as the disease is more common in his neighborhood than in any other portion of the county, I am inclined to believe it is from this cause. It has not been so frequent in the last two years as formerly. The obtaining of physicians in such cases more than before, and the improvement in their management, I think is the reason.—*American Journal of the Medical Sciences*, 1863.

Tetanus Nascentium.

(By J. Lewis Smith, M.D., Physician to the Infant Asylum; Physician to the Prot. Epis. Orphan Asylum, New York.)

Tetanus Nascentium, or, as it is sometimes called, tetanus neonatorum, or or tetanus infantum, is one of the most interesting diseases of infancy. It stands first in point of time, in the long catalogue of fatal maladies; its advent is sudden and unexpected; life promising well, for such infants are usually robust, is destroyed in a few hours, turning the joy of parents into sorrow, and blasting their seemingly well grounded expectations. Tetanus nascentium is also not a rare complaint, although it is more frequent in some localities and some conditions of life than in others. In this city it is more common than tetanus at any other age, or indeed in all other ages, since, according to the reports of the City Inspector, more die from tetanus in the first year of life than subsequently, and every physician knows that death from this disease, in the nursing infant, occurs, with very few exceptions, in the first two weeks of life.

Interesting and important as is tetanus nascentium, it must be confessed that our knowledge of it is much more limited and imperfect than it should be, when we consider what great advancement has been made in pathological inquiries during the present century. Our knowledge in reference to the causation, symptoms, and proper treatment of this disease, is not much superior to that of M. Dazille or Dr. Joseph Clarke, who lived before the year eighteen hundred.

Did we better understand the pathology of diseases in the new-born, or could we more accurately ascertain the condition of organs at this age, doubtless we should occasionally consider those phenomena, which we now designate as a disease, *per se*, under the title tetanus nascentium, as symptoms of some other affection. But as the tetanic rigidity and spasms in the new-born occur so abruptly, masking all other symptoms, and ordinarily ending so speedily in death, without our knowing certainly whether or not there is any antecedent disease, it seems eminently proper that we should recognise the state in which such muscular rigidity occurs, with such a rapid result as an independent affection.

This explanation is required from the fact that I have added to my collection of cases one from Billard, which this observer relates under the head of spinal meningitis.

I have felt more fully justified in employing the records of this case from the fact that others have recorded very similar cases as examples of tetanus nascentium. In Billard's case, an infant, three days old, was attacked with convulsions. "His limbs were rigid and violently bent; the muscles of the face were in a continual state of contraction." On the following day "the convulsions continued; * * * the body remained rigid, and the vertebral colum, which the weight of the trunk will cause to bend, with the greatest ease, in a young infant, remain straight and immovable, whenever the child was raised." At the autopsy, in addition to the meningital apoplexy, which is commonly present in those who have died of tetanus nascentium, a thick pellicular exudation was found on the spinal arachnoid. This case certainly presented the symptoms and history which are characteristic of tetanus nascentium.

FATAL CASES.

Case 1. Male; taken when three days old; lived sixty hours.—Labatt, Edin. Med. and Surg. Jour., April, 1810.
" 2. Female; taken when three days old; lived forty hours.—Ibid.
" 3. Taken when five days old; lived fifty hours.—Ibid.
" 4. Taken when three days old; lived one day.—Ibid.
" 5. Male; taken when two days old; lived two days.—Billard, Treatise on Diseases of Children, Stewart's trans., p. 477.
" 6. Male; taken when three days old; lived two days.—Romberg.
" 7. Male; taken when six days old; lived ninety three hours.—Dr. Imlach, Month. Jour. Med Sci., Aug., 1850.
" 8. Female; taken at five days; lived four days. Caleb Woodworth, M.D., Boston Med. and Surg. Jour., Dec. 13, 1831.
" 9. Negro; taken at seven days; lived twenty-four hours.—P. C. Gaillard, M.D., South. Jour., of Med. and Pharm., Sep., 1846.
" 10. Male; taken when seven days old; lived one day.—Augustus Eberlie, M.D., Missouri Med. and Surg. Jour. 1847.
" 11. Taken when seven days old.—D. B. Nailer, N.O. Med. Jour., Nov., 1846.
" 12. Male; taken when three days old; lived one day.—N. O. Med. and Surg. Jour., May, 1853.
" 13. Negro; taken when three days old; lived three days.—Robert H. Chinn, M.D., N.O. Med. and Surg. Jour.
" 14. Taken when two days old; died in four hours after the doctor's visit.—Ibid.
" 15. Taken when seven days old; lived one day.—C. H. Cleaveland, New Jersey, Med. Rep., April, 1852.
" 16. Negro; taken when seven days old; death finally.—Greensvill Dowell, Amer. Jour. of Med, Sci., Jan., 1863.
" 17. Taken when twelve days old; lived one day.—Thos. C. Boswell communicated to Dr. Sims, Amer. Jour. of Med. Sci., April, 1846.

Case 18. Taken when about five days old; died at about the age of nine days. B. R. Jones.—American Jour. Med. Sci.
" 19. Taken at or soon after birth; lived two days.—Dr. Sims, Amer. Jour. of Med. Sci. April, 1846.
" 20. Taken at the age of six days; lived one day.—Ibid.
" 21. Taken when three days old; lived two days.—Ibid.
" 22. Male; taken at the age of eight days; died in three hours.—Communicated to the writer.
" 23. Taken at the age of twelve hours; lived two days.—Communicated to the writer.
" 24. Female; taken when seven days old; lived forty-five hours.—The writer.
" 25. Male; taken at the age of seven days; lived about forty-eight hours.—Ibid.
" 26. Female; taken at the age of eight days; lived three days.—Ibid.
" 27. Female; taken at the age of five days; lived three days.—Ibid.
" 28. Female; taken when four days old; lived two days.—Ibid.
" 29. Taken when six days old; died next day.—Ibid.
" 30. Taken when five days old; lived twenty-four hours.—Ibid.
" 31. Taken when eight days old; lived two days.—Ibid.
" 32. Male; taken when five days old; lived one day.—Ibid.

FAVORABLE CASES.

Case 1. Negro; female; taken when three days old; recovered in a few days. Rob't S. Bailey, Charleston Med. Jour. and Rev., Nov., 1848.
" 2. Negro; taken at eleven days; recovered in fifteen days.—W. B. Lindsay, N.O. Med Jour., Sept., 1846.
" 3. Negro; taken when ten days old; recovered in thirty-one days.—P. C. Gillard, Charleston Med. Jour. and Rev., Nov., 1853.
" 4. Male; taken at the age of eight days; recovered in twenty-eight days.—Ibid.
" 5. Negro; taken at seven days; recovered in fifteen days.—Augustus Eberle, Missouri Med. and Surg. Jour., 1847.
" 6. Taken when eight days old; recovered in four weeks.—Furlong, Edin. Med. and Surg. Jour., Jan., 1830.
" 7. Taken at the age of one week; recovered in two days.—Dr. Sims, Amer. Jour. of Med. Sci., April, 1846.
" 8. Female; taken at the age of three days; recovered in five weeks. —The writer.

Period of Commencement.—Finckh, who saw cases of tetanus nascentium in the Stuttgard Hospital, states (*Hecker's Annalen*, vol. iii., No. 3, page 304,) that it began in one case on the second day, in eight on the fifth, and in seven on the seventh.

Prof. Cederschjold, of Stockholm, treated forty-two cases in hospital practice, in 1834, and in these cases it usually commenced between the ages of four and six days; Copland says (*Medical Dictionary*) that it generally commences in the first, seven or nine days after birth, and rarely later than the fourteenth. Romberg says that it commences between the fifth and ninth days. In two hundred cases observed by Reicke, in Stuttgard, in the course of forty-two years, it was never found to commence before the fifth, rarely after the ninth, and never after the eleventh day. Schneider says that the disease occurs oftenest between the second and seventh, and rarely after the ninth day. In six cases reported by Dr. C. Levy, of Copenhagen, it began in two on the third day, in two on the fifth, and in two on the sixth. Dr. Greensville Dowell (*American Journal of Medical Sciences*, Jan. 1863), who has seen much of the disease among the negroes of Mississippi and Texas, says it is almost sure to come on between the fifth and twelfth days after birth. In the forty cases collected by myself, the disease began as follows:

AGE.	CASES.
One day or under	2
Two days	1
Three days	9
Four days	2
Five days	6
Six days	3
Seven days	8
Eight days	6
Ten days	1
Eleven days	1
Twelve days	1

Very rarely, as will be seen hereafter, tetanus nascentium begins at, or so soon after birth, that it may be properly called congenital.

Frequency in certain Localities.—Tetanus nascentium occurs probably in all countries, but it does not add greatly to the mortality, except in certain localities. Some of the eminent British and Continental physicians confess to have seen so few cases, that they have almost no personal knowledge of the disease. On the other hand, there are, or have been places in every zone where it is, or has been so prevalent as to sensibly check the increase of population. The attention of the profession, more than half a century since, was directed to the prevalence of tetanus nascentium in the Island of Heimacy, off the coast of Iceland. On this island, scarcely an infant escaped, while on the mainland, scarcely one was affected. Heimacy, the product of volcanic action, of small extent, and almost destitute of vegetation, supports a scanty population. The inhabitants live chiefly on the flesh and eggs of the sea-fowl, and are filthy and degraded in their habits. About the year 1810, the Danish Government deputed the land-physicus of Iceland to visit Heimacy, and ascertain the nature of the disease, which was so destructive to the infants. Although this gentleman from his brief stay saw no case himself, he obtained interesting particulars in reference to the disease, especially its great mortality, from the priests and parents. At this time scarcely an infant escaped. Again, according to Dr. Schleisner, whose observations in reference to the same locality were made about fifteen years ago, this disease was still the most fatal of all infantile affections.

Tetanus nascentium is also represented as very fatal in the Island of St. Kilda, off the coast of Scotland. In the temperate regions of America and and Europe, cases are not frequent, except occasionally in the poor quarters of the cities, in foundling hospitals, and rarely in country towns, where the conditions are favorable. The records of the Dublin, Stuttgard, and Stockholm Lying-in Asylums furnish many cases. In the town of Fulda, Germany, in 1802, Dr. Schneider saw six cases in fourteen days, while a midwife in the same place stated that she had seen more than sixty in nine years.

But the greatest mortality is in the warm climates, both of the Eastern and Western Hemispheres. In the West Indies, the Southern portion of the United States, the equatorial regions of South America, and in the islands of

Minorca and Bourbon, it has, in many localities, been the most frequent and fatal of infantile maladies.

It is an interesting fact, that in the warm regions the victims are chiefly negro infants. L. S. Grier, M.D., of Mississippi, says, in the *New Orleans Medical and Surgical Journal*, May, 1854:—"The first form of disease which assails the negro among us is trismus. The mortality from this disease alone is very great. No statistical record, we suppose, has ever been attempted, but, from our individual experience, we are almost willing to affirm that it decimates the African race upon our plantations within the first week of independent existence. We have known more than one instance in which, of the births for one year, one-half became the victims of this disease, and that, too, in spite of the utmost watchfulness and care on the part of both planter and physician. Other places are more fortunate, but all suffer more or less; and the planter who escapes a year without having to record a case of trismus nascentium may congratulate himself on being more favored than his neighbors, and prepare himself for his own allotment, which is surely and speedily to arrive." Dr. Wooten (*New Orleans Medical and Surgical Journal*, May, 1846), says, "It is a disease of fatal frequency on the cotton plantations in this section of Alabama." He has, however, never seen a a white child affected with it.

In New Orleans, according to the death statistics in our possession, which, however, relate to only one year, tetanus nascentium is the most fatal of all diseases except phthisis. Mr. Maxwell says, in the *Jamaica Physical Journal*, (copied in the *London Lancet*, April 11, 1835):—"From observations that I have made for a series of years. * * * * * I found that the depopulating influence of trismus nascentium was not less than twenty-five per cent. It scarcely has a parallel within the bills of mortality." This gentleman's observations relate to to the West Indies. Similar testimony comes to us from Cayenne and Demerara.

It is seen that the disease prevails in regions wide apart, and presenting very diverse climatic conditions; but there is a similarity, as regards the personal and domiciliary habits of the people, where its ravages are most felt. It occurs chiefly among those who are filthy and degraded in their habits, who live either from choice or necessity in neglect of sanitary requirements. And this fact aids us in an understanding of the subject which we shall next consider, namely—

Causes.—That uncleanliness and impure air are a cause of tetanus nascentium is as fully demonstrated as most facts in the etiology of diseases. The attention of the profession was forcibly directed to this cause by Dr. Joseph Clarke, in a paper read before the Royal Irish Academy in 1789. This physician was in charge of the Dublin Lying-in Asylum, and had rightly concluded that the great mortality among the new-born infants was due mainly to imperfect ventilation. Through his advice, apertures, twenty-four inches by six, were made in the ceiling of each ward; three holes, an inch in diameter, were bored in each window-frame; the upper part of the doors leading into the gallery were also perforated with sixteen one inch apertures, and the number of beds was reduced. The result of these simple sanitary regulations may be seen from Dr. Clarke's own statement. He says: "At the conclusion of the year 1782, of 17,650 infants born alive in the Lying-in Hospital of this city, 2,944 had died within the first fortnight, that is, nearly every sixth child." The disease in nineteen cases out of twenty was tetanus nascentium. After the wards were better ventilated, namely, from 1782 till the time of the preparation of Dr. Clarke's paper, 8,033 children were born in the hospital, and only 419 in all had died, or about one in nineteen. So impressed was Dr. Evory Kennedy, who at a later period, had charge of the same asylum, with the belief that Dr. Clarke had discovered the true cause, and had been able in a great measure to prevent it, that he exclaimed with enthusiasm:—"If we except Dr. Jenner, I know of no physician who has so far benefitted his species, making the actual calculation of human life saved the criterion of his improvements." The ten cases occurring in my own practice, and which are employed in the statistics of this paper, were all met in tenement-houses or shanties, where habits of cleanliness are impossible, and I have not yet seen or heard of a case in the better class of domiciles. The statements of physicians in the Southern States, who speak from extensive observation among the negroes, are strongly corroborative of the idea that the disease is, in great measure, due to the cause we are considering.

Dr. Greensville Dowell, residing in Brazoria county, Texas, believes that he has sometimes been able to trace the disease to the old bed-clothes saturated with excrementitious matters, which are found in the negro cabins. In a well-written paper, published in the *Nashville Journal of Medicine and Surgery*, June 1851, by Prof. John M. Watson, the frequency of the disease among the negroes is accounted for as follows:—

"When called to see their children we find their clothes wet around their hips, and often up to their armpits, with urine * * * * The child is thus presented to us, when, on examination, we find the umbilical dressings not only wet with urine, but soiled likewise with feces, freely giving off an offensive urinous and fecal odor, combined at times with a gangrenous fetor, arising from the decomposition, not desiccation of the cord."

Another cause is believed to be some irritation in the bowels, as from retained meconium. Observers in the Southern States, and elsewhere, occasionally mention this as a cause. In one case, treated by myself, there was obstinate constipation immediately before the attack, and in another diarrhœa preceded; and this or the state which produced the diarrhœa, was the only apparent cause of the disease.

In other cases the only assignable cause is exposure to wet or cold, or changes in temperature. Prof. Cederschjold attributed the epidemic, which he observed in Stockholm, to a sudden change of temperature, from hot weather, in May, to frosty, in June. In a case related by Dr. P. C. Gaillard, of Charleston, in the *Southern Journal of Medicine and Pharmacy*, September, 1846, the disease commenced as follows:—The nurse came in with a wet apron and clothes, in the evening, a short time after she had taken the child into her lap, it sneezed violently two or three times. At 10 P.M. tetanus began. The disease in certain localities on the continent is said to be more frequent where there is no parish church, in consequence of exposure in carrying infants to be christened. The influence of the weather, in the production of tetanus nascentium, is also shown by facts observed in the Stuttgard Hospital. In an aggregate of twenty-five cases, treated in that institution, all but three occurred in the cold months. In the Island of Cayenne, at a hamlet surrounded by mountains and dense forests, tetanus attacked only one in every twelve or fifteen infants. After a great part of the forests had been cut down, so as to allow access to the cold sea winds, almost all the new-born infants fell victims to tetanus (Insel. Cayenne).

Hein relates that a citizen of Berlin lost successively two children with tetanus nascentium. When the second child fell ill he observed that its cradle was exposed to a current of air. At the third accouchement the position of the cradle was changed, and the infant escaped. Exposure to wet and cold, had been long recognized as a cause of the disease. Sauvages, many years ago, said, "Hic morbus hieme et cum aura humida saepius advenit quam sicca aestate.,'—*Nosol. Method.*, vol. i., p. 581.)

The causes of tetanus nascentium enumerated above may be proximate or remote; may produce the disease by their direct effect on the system, or by producing a pathological state, which, in turn, leads to the development of the disease. There are other causes, which are always proximate, namely, organic alterations. In the bodies of these who have died of this disease, structural changes are found, which doubtless result from the spasms, and sometimes other abnormal states of organs, which, from their nature, could not be a result, and which being observed in different cases, must be regarded as proximate or immediate causes. The most frequent of such lesions is inflammation of the umbilicus and umbilical vessels.

Moschion, who lived in the first century of the Christian era, stated in writings still extant, that stagnant blood, in the umbilical vessels, sometimes produced dangerous disease in the new-born infant, and it is supposed that he referred to cases of tetanus infantum. In modern times the attention of the profession was more particularly directed to this cause, by a paper published by Dr. Colles, in the first volume of the *Dublin Hospital Reports*, in 1818. The observations published in this paper were made in the Dublin Lying-in Hospital, during the period of five years. In each of these years he had witnessed from three to five post-mortem examinations in cases of infantile tetanus, and the lesions, he states, were in all much alike, as follows:—The floor of the umbilical fossa was lined by a membrane apparently formed by suppurative inflammation, and in the centre of this fossa was a large papilla. This papilla consisted of a soft yellow substance, apparently the product of inflammation, and in all cases the umbilical vessels were in contact with this substance, and were pervious. In a few instances superficial ulcerations were found near the mouth of the umbilical vein, and occasionally the skin, surrounding the umbilicus, was raised. The peritoneum covering the vein was highly vascular, though often not to a greater distance than an inch above the umbilicus; sometimes as far as the fissure of the liver. The peritoneum in the course of the umbilical arteries presented the inflammatory appearance, in still greater degree, often as far as the sides of the bladder. The cellular substance lying along the arteries and urachus, anteriorly, was loaded with a yellow watery fluid. The inner surface of the umbilical vein was not inflamed, but its coats, in general, were thickened. On slitting open the arteries a thick yellow fluid, resembling coagulable lymph, was found within their coats, and in all cases these vessels were thickened, and hardened as far as the fundus of the bladder.

Dr. Finckh, who observed twenty-five cases in the Stuttgard Hospital, believes that the most frequent cause was suppuration, or ulceration of the umbilical cord. In ten of the twenty-five cases, the navel was dry and cicatrized; in the remainder, it was either wet or swollen, with a bluish red inflamed edge at the margin of the navel; a dirty viscid pus covered the umbilical depression. In all cases, in which the navel was not completely healed, it had a peculiar discolored appearance.

Dr. Levy, physician of the Foundling Hospital, in Copenhagen, attended twenty-two cases in that institution, in 1838 and 1839. Of these, twenty died, and fifteen were examined carefully after death. In fourteen there were decided marks of inflammation in the umbilical arteries, especially in those portions lying along the urinary bladder; in several cases the peritoneum over the arteries was much injected, and in three adherent either to the omentum or intestine by coagulable lymph; the coats of the arteries were thickened, their cavities dilated, and containing more or less dark-reddish brown, or greenish puriform matter, always fetid. Sometimes the arterial tunica interna was found ulcerated, and absent in places, and there was a spongy thickening of the subjacent cellular tissue. In two cases the ulcerative process had extended from the tunica interna to the peritoneum, and in one had perforated even the peritoneum, producing a deposit of thick ichorous matter around the opening; in one case both arteries were so softened that their coats were scarcely distinguishable, and in another these vessels had become gangrenous. The appearance of the umbilicus was unchanged in four cases; in ten the fundus was red, and filled with puriform fluid, which quickly reappeared when removed, and in general, shortly before death, the navel presented a greenish color.

According to Romberg, Dr. Scholler made post-mortem examinations in eighteen cases of tetanus nascentium, and in fifteen found inflammation of the umbilical arteries. These vessels were swollen near the bladder, in one case to the diameter of four lines, and were found to contain pus. The lining membrane was eroded, or covered with an albuminous exudation. Both arteries were not always equally inflamed, and in three cases only one was affected.

Schneeman found minute points of suppuration in the umbilical vein, in eight cases (*Holscher's Annalen*, vol. v., p. 484, 1840), and pus throughout the course of this vessel in one.

The observations mentioned above were made for the most part in hospitals on the continent, but there is a large amount of similar testimony furnished by physicians in private practice. M. Boiran, of the Isle of Bourbon, says he has found in every case inflammation around the umbilicus (*Gazette Medicale*, Paris, July 11, 1841). Dr. John Furlong (*Edinburg Medical and Surgical Journal*, January, 1830), who resided at St. John's, Antigua, attributes the disease to improper dressing of the umbilicus. The same opinion is expressed by Mr. Maxwell, who also saw the disease in the West Indies (*Jamaica Physical Journal*, copied into the *London Lancet*, April 11, 1855). Dr. Ransom states, in a communication to Prof. John M. Watson (*Nashville Journal of Medicine aud Surgery*, June, 1851), that he has never seen a case of tetanus nascentium, in which the umbilicus was healthy. In a case related by Robert S. Baily, in the *Charleston Medical Journal and Review*, Nov., 1848, there was a hard scab on one side of the umbilicus, and this part was much distended. A discharge followed the removal of the scab, and the child recovered. In a favorable case, related by W. B. Lindsay, in the *New Orleans Medical and Surgical Journal*, Sept., 1846, the umbilicus was tumid, and not disposed to heal. Dr. H. O. Wooten (same Journal, May, 1846) attributes the disease to the condition of the umbilicus and umbilical vessels, and states that he has found the umbilicus gangrenous. A case is also narrated in the *New Orleans Medical and Surgical Journal*, May 1, 1853, in which the umbilical vessels were blocked up by purulent matter. Robert A. Chinn, M.D., Brazoria, Texas, (*New Orleans Medical and Surgical Journal*, Sept., 1854), believes one cause of the disease to be improper tying and management of the umbilical cord, by which a diseased state is produced, which extends to the umbilicus and thence to the viscera. Dr. Dowell, of Texas, relates, in the *American Journal of the Medical Sciences*, January, 1868, a case in which the umbilicus was healed, but there was a dark blood in the umbilical vein, and yellowness around the navel. Since observing this case, he has several times made post-mortem examinations, and in the majority of cases has found the same state of the umbilicus. At a meeting of the Obstetrical Society of Edinburg, April 24th, 1850, Dr. Imlach related a case in which there was a dark and gangrenous appearance of the integument around the umbilicus, and the peritoneum underneath was also dark but not inflamed; umbilical vein healthy; a little fibrin in the left umbilical artery; right umbilical artery much diseased; its two inner coats apparently destroyed, and in their place a yellow pultaceous slough, in which pus-globules were discovered with the microscope.

It is evident that the pathological state of the umbilicus and umbilical vessels, described above, and which has been noticed by so many observers, in different countries, cannot result from the tetanus, for there is nothing in this affection which can possibly develop an inflammation. And if this were possible, so extensive lesions, as have sometimes been observed, would not be likely to occur in the short space of one or two days. The belief that these lesions precede and produce the tetanus is strengthened by well-known facts in reference to tetanus in the adult, since the state of the umbilicus in the one period of life is analogous to the wounds which produce tetanus in the other. It is still further strengthened by the fact, which will appear further on this paper, that tetanus nascentium, from being frequent in certain localities, has become infrequent through greater care in dressing and managing the umbilical cord.

But there are cases of tetanus nascentium in which there is no disease in or about the umbilicus. Dr. Finckh, of Stuttgard, made careful examinations of the umbilical vessels in eleven cases, without discovering any pathological change. Dr. Samuel B. Labatt, Master of the Dublin Lying-in Hospital, published in the *Edinburgh Medical and Surgical Journal*, April, 1819, a paper entitled "An Inquiry into an Alleged Connection between Trismus Nascentium, and Certain Diseased Appearances in the Umbilicus." This paper was designed as a reply to the essay of Dr. Colles. Dr. Labatt relates several cases, in which there was no disease of the umbilicus and umbilical vessels, and others, in which the disease was so slight that it probably produced no injurious effect on the health of the child. Dr. James Thomson, who spent considerable time in the tropical regions, says (*Edinburgh Medical and Surgical Journal*, Jan., 1822):—"I have, myself, examined nearly forty cases of infants that have sunk under the complaint. In many, I have looked at no other part but the navel, and have found it in all states; sometimes perfectly healed, especially if the infants had lived several days; at other times a simple clean wound. When death occurred on the fifth or sixth day, the wound was frequently in a raw state. I never yet saw it in a sphacelated condition." This writer concludes from his observations, that there are cases in which the cause is located elsewhere than in the umbilical region. In the *Dublin Journal of Medical and Chemical Science*, Jan., 1836, Dr. John Breen, criticising the theory which locates the cause of tetanus nascentium in the umbilicus and umbilical vessels, remarks:—"From dissettions * * we have never been able to discover any pecular morbid appearance which would justify us in offering any explanation of the pathology of the disease." In our own cases there was no evidence of disease of the umbilicus or umbilical vessels, so far as could be ascertained by external examination, and in one (No. 32) a careful post-mortem examination disclosed no lesion of these parts.

The inference from the above observations evidently is, that although umbilical disease is a frequent cause of tetanus nascentium, cases occur in which such disease is not present, and we must look for some other cause. From the nature of tetanus nascentium, the attention of observers has been largely directed to the nervous system, in the belief that sufficient cause of the disease might be found located there, and occasionally the correctness of this belief has been shown by post-mortem examinations.

We have alluded, in another connection, to a case from Billard, in which tetanic rigidity occurred in an infant three days old, as the result of spinal meningitis. That tonic spasms, not infrequently occur in older children, in consequence of meningeal inflammation, is well known, and in some of the reported epidemics of tetanus nascentium, meningitis was really present, and was probably the sole cause. Such an epidemic was observed by Prof. Cederschjold in Stockholm, in 1834. Within a few months, he treated forty-two cases, and in addition to the lesions, which are known to result from tetanus, there was found, in those examined after death, a plastic exudation at the base of the brain. Finckh, of Stuttgard, made twenty post-mortem examinations of those who had died of this disease, and in nine found spinal meningeal inflammation.

Meningitis in the new-born infant is, however, comparatively rare, and we must therefore regard it as not a common cause of tetanus.

Here comes up an interesting question, and one which a few years since attracted much attention. Can injury of the brain, or medulla oblongata from displacement of the cranial bones, during the birth of the child, or in consequence of pressure on the head from position after birth cause tetanus nascentium?

In 1846, there appeared from the pen of Dr. Sims, then practising at Montgomery, Ala., a paper designed to show that this disease is produced by pressure, exerted on the nervous centre through depression of the occipital bone. In 1848, the same writer published a second paper, also in the *American Journal of Medical Sciences*, fully enunciating his theory as follows: "That trismus nascentium is a disease of centric origin, depending on a mechanical pressure exerted on the medulla oblongata, and its nerves; that this pressure is the result, most generally, of an inward displacement of the occipital bone, often very perceptible, but sometimes so slight as to be detected with difficulty; that this displaced condition of the occiput is one of the fixed physiological laws of the parturient state; that when it persists for any length of time after birth, it becomes a pathological condition, capable of producing all the symptoms characterizing trismus nascentium, which are instantly relieved simply by rectifying this abnormal displacement, and thereby removing pressure from the base of the brain." In both papers cases are narrated in support of this theory, but there are serious objections to this mode of explaining the occurrence of the disease. In the first place, if this explanation were correct, tetanus ought ordinarily to occur sooner, for the occiput is as much depressed previously, and in the majority of cases more depressed, than at the period when it does actually commence. Compression of the medulla would certainly be followed by immediate and marked symptoms, instead of an immunity for four or five days.

Again, well-known facts, in reference to the causation of tetanus nascentium, conflict with Dr. Sims' theory, as epidemics of the disease, its prevalence in one locality, and absence in another, although no particular attention is given to the position of the infant, the diminution of the number of cases by greater attention to cleanliness, of which there is abundant proof. Besides there are many cases of tetanus nascentium, at the commencement of which there is no perceptible displacement of the occipital bone, and no scientific inquirer should assume to exist what is not apparent in order to support a theory.

A careful examination of the cases of Dr. Sims must convince any one who has seen much of the disease that there is no certainty that several of them are genuine, and there is a strong probability that some are not. Besides, other physicians have not derived that benefit from placing the infant on the side, which would be likely to result were the theory of Dr. Sims correct.

After the publication of Dr. Sims's papers, the attention of physicians in the Southern States, who saw much of infantile tetanus among the slaves, was directed to an examination of the correctness of his views, and though a few wrote approvingly of them, in the belief that his explanation held good in some cases, they were rejected by the majority. Drs. P. C. Gaillard, (*Charleston Medical Journal and Review*, Nov., 1853), Wakly (*New Orleans Medical and Surgical Journal*, 1849), and Grafton (*New Orleans Medical and Surgical Journal*, July, 1853) relate cases in which there was no evidence of occipital displacement. In my own cases depression of the occipital bone was sometimes noticed, occasionally to a considerable extent, but in no instance did this depression seem to be a cause, but a result, and it became more and more marked as the disease advanced.

The correct explanation of the inequality of the cranial bones, sometimes observed in tetanus nascentium, is probably as follows:—If the new-born infant becomes emaciated, the volume of the brain is diminished, like that of the trunk or limbs, and the sinking of the occipital bone simply corresponds with the amount of waste in the cerebral substance. Whatever the disease in the young infant, if there is much emaciation, the parietal bones will usually be found more prominent than the occipital. Now, in fatal tetanus nascentium emaciation is very rapid; those fleshy and plump, if the disease do not speedily end, become pinched and wrinkled. Viewed in this light, the occipital depression, so far as it has any effect, must be regarded as conservative. It prevents serous effusion, which, in a similar state of waste, occurs in older children, whose cranial bones are consolidated.

(*To be continued in April No.*)

DR. R. H. STORER.—This gentleman sends us his advertisement of a course of lectures. We are personally acquainted with the Prof., and have frequently quoted him in our JOURNAL. He is a lover of Texas, having spent some time at San Antonio. As to the course of lectures proposed, we know no one more fully qualified than he. He studied under Prof. Simpson, of Edinburg, Scotland, and has filled the chair of Obstetrics in Rusk Medical College for a number of years, and has performed some of the most bold and successful operations on the womb and vagina that has ever been attempted. If any one wish to make this subject a specialty, he could not do better than attend his lectures.

To Subscribers.

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Bibliographical Notices.

Practical Dissections.—By Richard M. Hodges, M.D., formerly Demonstrator of Anatomy in the Massachusetts Medical College, &c. Second edition, thoroughly revised. In one handsome royal 12mo. volume of about 300 pages neatly half bound, $2. From Henry C. Lea, publisher, Phila.

The object of this work is to present to the anatomical student a clear an concise description of that which he is expected to observe in an ordinar course of dissections. The author has endeavored to omit unnecessar details, and to present the subject in the form which many years experience has shown him to be the most convenient and intelligible to the student.

This work is explained in the above paragraph, and we are reading it with much interest. We like the arrangement and the matter, and fully approve of his leaving out all those parts that cannot be fully demonstrated in an ordinary dissection. These parts should be left to anatomies—proper and histologies.

Transactions of the American Medical Association, Vol. XVII., 1866—From Dr. Casper Wister, Treasurer of Association. Price, $5.

The above work can be had by writing to the Secretary or Treasurer of the Association, in Philadelphia. The work is well printed and illustrated. It is invaluable as the standard of Ethics on all branches of medical sciences as well as the exponent of everything valuable that occurs in twelve months.

Obstetrics—the Science and the Art.—By Charles D. Meigs, M.D., lately Professor of Midwifery, &c., in the Jefferson Medical College, Philadelphia, &c. Fifth edition, revised, with one hundred and thirty illustrations. In one very handsome octavo volume of 760 pages, extra cloth, $5.50; leather, $6.60.

From the Author's Preface.—I tender to my medical brethren a new and improved edition of my work on Midwifery, for the success of which I am so greatly indebted to them.

As this is probably the last occasion I shall have to endeavor to make the book better for instruction than ever it was before, so have I felt constrained to carefully revise every one of its paragraphs, that I might leave it in a condition more worthy to be offered to my brethren.

From H. C. Lea, publisher, Philadelphia.

We look upon this work as the best in the English language. It is the last edition of Prof. Meigs, and it is practical as well as theoretical. The auther used to boast (and not without reason), twenty years ago, when we were a student and attending his lectures, that he had received "*in these two hands of mine more children than any man living.*" We are proud of the work and we can recommend it to one and all. Dr. Meigs is a Georgian educated at Augusta, and always treated students with kindness and courtesy. He has retired from the chair of obstetrics in Jefferson Medical College, and this work is probably the last edition he will ever revise in person.

The Indigestions; or, Diseases of the Digestive Organs Functionally treated.—By T. K. Chambers, M.D., Consulting Physician to St. Mary's Hospital, London, &c. In one handsome octavo volume, extra cloth, $2.50. From H. C. Lea, publisher, Phila.

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It is in the combination of these qualities—clear and vivid expression, with thorough scientific knowledge and practical skill—that his success as a teacher or literary expositor of the medical art consists; and the volume before us is a better illustration than its author has yet produced of the rare degree in which those combined qualities are at his command. Next to the diseases of children, there is no subject on which the young practitioner is oftener consulted, or on which the public are more apt to form their opinions of his professional skill, than the various phenomena of indigestion. Dr. Chambers comes most opportunely and effectively to his assistance. In fact, there are few situations in which the commencing practitioner can place himself in which Dr. Chambers' conclusions on digestion will not be of service.—*London Lancet*, February 23, 1867.

This elegant volume, by the author of "Lectures, chiefly Clinical," has been our Christmas book, and we found it as inseresting as any of the popular annuals which deluge us at that festive season. We hope the author will accept as a well deserved compliment the remark, "that, after all that has been written upon this subject, we consider it a thorough triumph to have put forth so instructive a volume on indigestion."—*Dublin Medical Press and Circular*, January 23, 1867.

This is a practical work from a practical and scientific man, and upon a subject but little understood. The work is concise and easily understood. It treats of important subjects, as shown in table of contents, and on those subjects that often puzzle the oldest heads to advise any rational or reasonable course.

Ranking's Half-yearly Abstract.—Volume 44, for January, 1867, has just been issued, forming a handsome octavo, in paper covers, of 300 large pages, containing 220 articles in all departments of Medical Science, systematically arranged, with full table of contents and elaborate index, rendering it exceedingly convenient both for reading and consultation. The Abstract is issued semi-annually at $2.50 a year. Single volumes $1.50 each, free of postage.

This is a summary of everything new and valuable that has appeared in the current literature for the last six months. It is cheap and valuable. From H. C. Lea, publisher, Phila.

METEOROLOGICAL TABLE FOR JANUARY, 1864, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE	1-3 P M	SUN SET	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &c. A. M.	RAINS, FOGS, &c. P. M.	RAINS, FOGS, &c. NIGHT.
Fri...	1	41..48..	..34.85	30.41	N2-4..N2-4.....	....N1-3....E0-1	12	36	29	26	0........0............	ci1............ci1....	freezing in	the shade all	day..........
Sat...	2	24....29	..21.21	30.25	NE2-4.E1-4.....	E2,4 E2-4, E2-5..	27	37	39	34	cc9......ccs10......	ccn10..ncc10....n10	freezing....	.....R....R	R—— ....
	3	02..04..	..93.92	29.98	0....N0-1.......	....0.......N0-1	45	60	59	55	n10.....n10.........	....n10....n10......	R—— R——	R fog........	....R........
Mon .	4	94, 00,02	..95.00	30.01	N1-2. N1-3.....	NW2-4.N2-4.N2-4	45	46	40	44	n10.....n10.........	n10.....n10.....n10	misty rain..	....R.....R	....
Tues.	5	10..19..	..15.18	30.14	N3-5....N3-5...	....N2-4....N1-4	24	33	31	29	ccci5..........dcis9	ccstr8....dcistr9....	freezing in	the shade all	day..........
Wed .	6	26..29.	27 23 26	30.26	N2-5....N2-5....	N1-4..N1-4..N2-4	21	27	26	25	ccs7.....dcstr8.....	dcistr10..dcistr9.cc9	do. "	" " "	" ....
Thurs	7	23......			N1-4, wind N all	all day.........	24				dcci4................		do. "	" " "	" ....
Fri ..	8		..29.30		wind N all day	....N1-3....N1-2		47	38			....ci2....ci2......	freezing...	....	....
Sat...	9	45..55..	45 39 42	30.47	N1-2....N1-2....	w1-2..s1-2..s1-0	21	38	35	31	0.........ci2........	dcici8...ccci7....cc8	freezing...	....	....
	10	27..29..	26 23 20	30.25	NE1-3..NE1-2..	NE1-3.E1-2.NE1-2	34	39	38	37	cc10....ncc10.......	n10....n10......n10	spr..........	spr..R..R..	....
Mon .	11	15....19	..08.10	30.13	0.....N1-2......	NE1-2..NE1-0..0	38	47	46	44	fc10....ccn10.......	ccn10..ncc10..ccn10	fog..........	....	....
Tues.	12	93..95..			0.........0......		43				fc10....fc10.........		do..........	....	....
Wed..	13	..84..85	..84.85			......w0-1..s1-3		70	58	56		....ci2....cistr8....		....	....
Thurs	14	76....87	85 90 02	29.89	0.....S1-2......	w2-4..N2-4.N1-3	43	71	56	57	ci....dcici5....cc10	....ci5....cicc7....	frost.........	....	....
Fri ..	15	19..26..	20...16	30.21	N0-1....N1-2.	E1-2.SE1-1.SE1-0	34	65	57	52	str1....ci3..........	ci................cicc2	do.	....	....
Sat...	16	05..12..	06...00	30.06	0......SE1-3....	s2-4..s2-4...s1-4	34	68	62	55	ci1....cc4...........	cc7....cc7......cc6	do.	....	R............
	17	97....04	00 04 11	30.04	1-4..S1-3.W2-5	w2-6..w3-5.N2-4	60	66	57	61	cc10....ccn9........	ccn9....ccci5....cc1	spr R shrs..	....	....
Mon .	18	25..29..	..23.27	30.26	NW1-3...NW1-3	N1-3....N2-4....0	40	60	48	49	0.........0..........	0.........0.........0	frost........	....	....
Tues.	19	26..40..	..20.21	30.25	0.....S0-1......	s1-2...s1-2..s1-2	30	67	55	51	0.........0..........	ci2......ci2......ci2	do.	....	....
Wed..	20	22..28..	..23.26	30.25	0.....W1-2......	w1-2..w1-2.N1-0	39	76	67	61	cis1.....0...........	0.........0.........0	do.	....	....
Thurs	21	27..32..	..27.30	30.00	0.....SE0-1.....	s0-1.sw0-1..s1-2	29	78	65	61	ci2.......0..........	ci4......ci2......ci1	fog.........	....	....
Fri...	22	31..36..	..29.29	30.33	N0-1..N0-1..S1-2	s0-1...s0-2..s0-1	47	72	64	61	0.........0..........	cucc6..cucc4...ccci2	fog.........	....	....
Sat...	23	25..27..	..23.22	30.24	0.....S1-3......	s1-3...s1-3..s1-2	47	74	62	61	cicc2.........ci3....	cicc4....cicc6....ci1	....	....	....
	24	16....19	16...15	30.17	0.....S1-2......	s1-2.........s0-1	43	78	68	63	cc1..............cc4	cc3...............0	smoky.......	....	....
Mon .	25	14....19	..11.12	30.15	0.........0......	s0-1..........0	44	81	70	65	0.........0..........	cccu5.........ccstr3	fog, slight..	....	....
Tues.	26	08..15..	..07.08	30.11	0.......0..W1-2	sw0-1. E0-1.-s1-2	45	81	71	66	0.........0..........	cc3.....cc1.....cis2	....	....	....
Wed .	27	06..10..	06 04 04	30.07	0.......E0-1......	s1-2..s1-2...s1-3	44	78	67	63	0.........cccuci3....	cucc6..cucc4...ccci3	....	....	....
Thurs	28	06..12..	..04.05	30.08	S0-2....S1-3....	s1-4s..2-4...s1-3	57	79	68	68	ccstr5....cccu7.....	cucc5..-cuci7....cc9	spr..........	....	ths..........
Fri.	29	01..05..	..95.96	30.00	S0-1....S1-2....	s2-4..s2-4...s2-4	65	79	68	71	cc8.......cc8.......	cucc7..cucc5...ccs4	....	....	....
Sat...	30	96....96	..94.95	29.96	SE1-2..S2-4.....	s2-4..s2-4...s1-3	67	76	67	70	fcc10.....cc10......	occu9.............cc5	....R........	....	R............
	31	90. 94..	..86.88	29.90	S2 4......S2-5..	s2-4..........s1-2	67	72	70	69	cc10......cc10......	....ccn10......cicc6	....	R............	shr..........
					Force of wind	as 2.31 is to 10.					Amount of clouds	as 5.13 is to 10.			

Max. range 30.55 ; min. 29..76 30. 14.33 mean for 27 days. 53°03 mean for 28 days ; max. temp. 81°. min. 12°

General Remarks.—1st—Ther. at zero at Shreveport, La. 2d—Light rain. 3d—Misty rain. 5th—2 to 3 inches of snow and Anderson yesterday. 7th—Leave for Galveston. 10th—The past two weeks coldest weather known in Texas by the oldest inhabitant—shorter periods have been known. 12th—Leave for Galveston 9 a.m. 13th—Returned to-day 3 p.m. 14th—3 p.m., a light Norther. 24th—5½ p.m., a lunar halo. 25th—5½ p.m., a beautiful lunar halo with rainbow colors about 60° diameters. 26th—Mocking and red birds singing. 28th—8 p.m., rainbow. 31st—Northern papers represent the present winter as unprecedentedly severe. A Milwauther. had been 30° to 40° below zero.

TIME.		BAROMETER.		OF	WINDS.		SUN	1-3P	SUN	MEA	CLOUDS.		RAINS, FOGS, &c.		
		A. M.	P. M.	BAR.	A. M.	P. M.	RISE		SET	THE	A. M.	P. M.	A. M.	P. M.	NIGHT.
Tues.	1	52, 63 ..	54, 51,52	30.56	0........E0-1....	SE2-4,SE2-4,SE1-3	28	67	53	47	0....ci1..........	ci2......ci2......ci3	frost and ice.	....	....
Wed..	2	42, 47 ..	42....38	30.43	0........E2-4....	SE2-4......SE1-3	46	67	61	58	ci4....cidci6........	dcici8..........ccstr7	....	....	....
Thurs	3	29, 35 ..	29, 26,27	30.30	0........SE1-3...	SE1-4.SE2-4. S2-4	46	69	62	59	ciccs3.....ccs10.....	ccns9 ..cc9....ccn10	....spr......	....	....
Fri...	4	21, 25 ..	19, 19,20	30.22	0........SE1-3 ..	E1-3.E1-0........	57	70	62	63	fc10.....rfc7........	cccun10,...n10..n10	fog....R....	R........	....
Sat...	5	20, 24 ..	23, 19,22	30.23	0......SE1-4....	NE1-3.......SE0-1	59	68	62	63	fc10.....fc10........	ccn10..ccn10.-ccstr4	fog..........	spr R	....
	6	20, 22 ..	17....16	30.19	0........E1-3....	SE1-4..E1-4..SE-2	52	71	62	62	cccistr9.....cc4......	ccci7..ccci7...ccstr6	....	....	R..........
Mon..	7	14, 16 ..	12....09	30.12	SE1-3.....SE2-3..	SE1-3..E1-3..S1-2	55	74	69	66	cnccci6....cncc8....	cuccci6..cucc8...cc7	....spr......	shr.........	R..........
Tues.	8	20, 26 ..	18, 16,17	30.21	N0-1....N1-4....	E1-3..E1-2..SE1-2	50	70	63	61	cc4.....cc1..........	0........0.........0	....	....	....
Wed..	9	24, 28 ..	24, 20,22	30.24	0.........N1-2...	SE2-4,.E2-5,.E1-2	39	67	56	56	0.....ci2	0........ci1........ci2	frost	....	....
Thurs	10	17, 18 ..	13....10	30.13	0........E2-3....	...........SE1-2	41	63	57	54	ci4....ci6	cc9....ccci7.... ccci8	....	....	....
Fri...	11	98, 98 ..	93....86	29.92	0........E1-2....	SE2-4,SE2-5,SE1-2	51	75	67	68	cc9.....fc10	cucc9..cucc6..cucc6	....	....	L NE!.....
Sat...	12	75, 76 ..	70....62	29.69	0........S1-2....	E1-2..........E0-1	57	77	70	68	fc10.....ccs3	cucc5..ccci4...cidci3	fog..........	....	..........R
	13	67, 77 ..	84, 86,96	29.81	W2-3.....NW2-4..	SE1-3..SE1-2.E1-2	63	71	57	64	ccn9.... ccs2.........	cc1........0..........0	....	....	....
Mon..	14	05, 09 ..	07, 02,00	30.04	N2-4.....N1-3....	S1-4..........S0-1	34	65	55	51	0.....0..............	ci2.....ci1..........	frost	....	....
Tues.	15	90, 94 ..	89....82	29.88	0........E2-4....	S1.2..........S1-2	54	67	67	61	cccn7.....cc9........	n10.....n10.......n10	...........R	R..........	....
Wed..	16	72, 75,79	83, 86,94	29.83	S2-5.....SW-35...	S1-2...S2-4..S1-4	69	63	48	60	ccn9....... ncc10....	ccun2......cc1 0	spr R shr....	....	....
Thurs	17	15.....27	.. 18, 22	30.21	N1-3.....N2-4....	S1-4..W2-4. W1-3	30	49	41	40	0.....0..............	0.........cc1.........0	frost and ice.	....	....
Fri...	18	24, 33 ..	27, 26,29	30.29	0........N1-2....	..N4-9........N..	27	59	43	43	0.....cc1............	0.........0..........0	frost and ice.	....	....
Sat...	19	37, 46 ..	36, 36,37	30.41	0........N1-2....	.........S1-2....	29	58	50	46	0.....0..............	ci1........ci1........ci	frost and ice.	....	....
	20	30, 35 ..	.. 26, 27	30.31	0....... E0-1....	S2-4....S1-4......0	29	68	54	50	cistr1.....ci1........	..........cistr1.....ci1	frost and ice.	....	....
Mon..	21	22, 27 ..	20....17	30.22	0........ S0-1....	E1-4..SE2-4.SE1-2	34	61	57	52	cc9.....ci2	ccs8..dcis9.. dcistr9	....	....	..........R
Tues.	22	06, 07 ..	96, 94,96	30.01	0......SE1-2	E2-4...... .SE1-2	53	73	59	62	ncc10.....ccn9.......	ccn9..cucc5...cucc3	R .... spr	shr..........	Lton,L NWE
Wed.,	23	92, 96 ..	.. 92, 94	29.94	0........E1-3....	SE1-2.E1-3.SE1-2	58	76	65	66	...cc10..............	cucc3.cucicc3..cistr2	fog ....R	....	....
Thurs	24	97, 05 ..	01, 00,01	30.01	E1-3.....SE2-4....	S2-3...S1-2..S1-3	51	60	60	57	....cccn5............	cccu8..ccstr8..ccstr3	fog....	....	....
Fri...	25	90, 90 ..	86, 84,83	20.85	SE2-3.. SE2-4....	SE1-2..S2-4..S1-2	50	68	65	61	cc9.....cc7..........	cccn6..cccn8.... cc9	....	....	spr.........
Sat...	26	88, 93 ..	90....03	29.88	N.2-5....N3-5....	SE3-5.E3-5..E4-6	63	69	68	66	cc9.....cc10........	ncc10..ncc10..ncu10	....R.........	R shr	ths R.......
	27	97. 06 ..	01, 00,05	30.01	0........W1-2....	NE2-4..........N1-3	39	53	42	45	cc8.....ccci5	cc2:.......ci1........0	....	....	....
Mon..	28	06.....13	.. 04, 93	30.08	0........ S1-2....	W1-2..W1-2..S0-1	30	65	59	51	0.....0..............	0.........0..........0	frost and ice.	....	....
Tues.	29	97, 05 ..	98.....85	30.00	SE1-2.. SE1-2....	S1-4..S2-4..SE1-4	35	73	63	57	0.....cc5............	cc4......cc5.....ccs8	frost	....	R L to E ...
Wed..	30	83.....78	.. 64, 63	26.73	N3-5.....N3-6....	E1-3..E1-4...E01	60	60	60	60	.....n10.............	ncu10...ncc10...n10	fog R ths...	shrs.	ths.........
Thurs.	31	87, 06 ..	07, 16,19	30.03	N3-5..N3-5..N3-5	N2-6..N2-6..N3-5	26	35	27	29	cc8.....cc5..........	cc3.....cc3.......cc3	freezing in	in the shade	all day .....

Force of wind as 2·89 is to 10.

Amount of clouds as 4.89 is to 10.

Max. range 30.'63; min. 29'62; 30.'08.97. **56°19' mean for the month .Max. temp. 77°; min. 26°.**

General Remarks.—1st—Very smoky. Highest mercury in bar. seen to date 30.'63. 4th—Heavy rain. 14th—Very mild norther here for the great decline in the barometer. 15th—Singular change of weather. 16th—10 a.m. ther. fell from 71 deg. to 60 deg. 26th—Norther came in after a heavy ths. at 7 p.m. 28th—Very little ice. 30th—Ths. at night, attended with sleet and hail. 31st—Snow-storm at Shreveport, La.

METEOROLOGICAL TABLE FOR MARCH, 1864, AT HOUSTON.

TIME.		BAROMETER. A. M.	P. M.	MEAN OF BAR.	WINDS. A. M.	P. M.	SUN RISE..	1-3P.M	SUN SET...	MEAN THER	CLOUDS. A. M.	P. M.	RAINS, FOGS, &C. A. M.	P. M.	NIGHT.
Tues.	1	14..24.	..17..22	30.19	N2-4....NW2-4..	N2-4.N2-5.NW1-2	85	58	50	48	ncc10....cc8	cc8......0........0			
Wed..	2	24..31..	..22..21	30.26	0....NW0-1	S0-1..........S0-1	80	68	60	53	0.........0	ci1......ci2......ci4	frost and ice		
Thurs	3	15..16..	..96..03	30.09	0....SE1-3	S2-4..S2-3...S1-3	35	69	60	55	cistr2... cicc3	cicc4..ccci4.ccistr5	frost		
Fri...	4	88..94..	..88..90	29.91	0....S1-4	W2-4.W2-4..N2-4	51	76	67	64	cistr3....cc7	cc7.....cc3......ci1	spr	hazy	
Sat...	5	93..97..	88.77.79	29.87	0....W0-1	W0-1..S1-2..S1-2	42	73	62	59	0.........0	0.....0....ci2			
	6	73..83..	75.73.76	29.78	0....SE1-3	S1-4..S1-3...S2-4	45	83	69	66	ci3....ci6	cicc7....cicc7....ci3			
Mon..	7	73..77..	74.70.71	29.74	0....S1-3	S1-3..S2-4...S1-3	61	84	71	72	cc8....cc10	ccci5....cc3....ccs2			L to N
Tues.	8	74..75..	68.62.62	29.60	S1-2....SE1-3..	SE1-3S.E2-4,SE2-3	63	69	67	70	cc10...n10	cucc8..cccicu6.ncc10	..........spr		L
Wed..	9	52..55..	47.45.49	29.50	SE1-4....S1-4..	S1-3..S2-4...S1-3	67	81	70	73	ncc10....cucc7	cucc9..cucc8..cucc8	R	spr.ths Nths	ths
Thurs	10	75..84..	..76..80	29.79	N2-4........N1-4	N2-5..N2-5..N1-2	50	67	60	59	cc8....ci1	ci1.....ci1....ci2			
Fri...	11	80..85..	77.73.69	29.77	0....W0-1	W1-2.NW1-2.S1-2	41	74	67	61	0.........0.......ci1	0......ci1.......ci1	frost		
Sat...	12	70..81..	85.85.92	29.81	S1-2..W1-4	W1-2.N1-4..N1-2	58	83	70	69	0....cc9....cc3	0.........0.......ci1			
	13	08..19..	14.13.15	30.14	0....E2-4	....E2-4....E1-2	41	75	55	59	0.........ci2	....cicc5.......ccs7			
Mon..	14	20..25..	..19..22	30.22	N1-4....N2-4	N2 4...N1-3....0	52	57	55	55	ccn10....nccs10	dcicc10..ccci7...cc9	R..spr.R		
Tues.	15	29..37..	32.27.27	30.23	N2-4....N3-5	N2-4..N2-4..N1-2	43	52	47	47	ccci5....dciccs6	dci10..dcin10..ncc10			
Wed..	16	28..32..	26....19	30.25	0....N1-3	N2-4..N2-4..N0-1	36	59	53	49	strci2....0	0.........0.........0			
Thurs	17	12..15..	..02..00	30.07	0....SW2-3	SW1-3.SW13.W0-1	30	72	65	56	0.........0	0.........0......ccs1	ice and frost		
Fri...	18	00..03	17.92.93	29.97	8....W2-4	SW2-4..S2-5..S2-4	41	71	66	62	0.........0	cc1.......0........0	frost		
Sat...	19	93..97..	93.87.86	29.91	0....W2-5	W2-5.SW2-4.W2-4	66	84	70	73	dci9....cc8	cc5....cc3.....ccs7			ths NW
	20	83..84..	77.73.70	29.77	S0-1....S1-3	S2-4..S2-4...S1-3	65	75	70	67	cc10....cccu10	cucc10..cccu10.cc10		spr	.........R
Mon..	21	64.61.67	68646864	29.69	NE2-4....E2-1	N2-5N2-6E2-4N2-4	47	47	47	47	n10....n10	ncc10...ncc10...cc10	sprR	Rths	
Tues.	22	89..00..	97.93.96	29.94	N2-4....N2-3	N1-3..S1-3..SE1-2	40	69	52	52	cc10....cc7	0........ci3.......ci3			
Wed..	23	97..04..	..94..95	29.99	E1-2....E2-5	SE2-5.SE3-5.SE2-4	44	67	57	56	cc8....ci2	cccu9....cc6...ccci7			.........R
Thurs	24	57735710	66.63.63	29.65	E3-6S3-6W1-3S1-3	W2-4..W2-5..S1-0	57	70	65	64	ncc10....ndci8	cc2.....cc2........0	ths hail		L to N..R
Fri...	25	73.88.90	..87..90	29.82	W2-4....W3-4	W1-3..W3-6.W0-1	55	70	65	64	0.........0	0.........0.........0			
Sat...	26	96..08..	05.05.05	30.02	0....S2-4	SE2-4..SE2.4S1-3	48	78	65	64	0.......0	ci1......c1........0			
	27	96.95.92	88.84.83	29.90	S1-3....S3-5,	S3-6..S1-3...S1-4	55	73	66	65	cc32....cc8	cccu9..ncc10..ncc10		spr R spr..	shrs
Mon..	28	80.88.90	88.84.85	29.85	SW1-4W2-5N2-5.N	N2-5.NW2-5.N1-2	63	70	62	65	cucc9....cc5	0.........0........0	shr		
Tues.	29	94..00..	96....00	29.98	W0-1....N3-5	N2-6..N3-6..N1-2	46	72	65	61	0.........0	0.........0.......ci1			
Wed..	30	83..85..	75.70.68	29.77	0....W2-4	S2-5..S3-5...S2-4	43	78	65	62	ccci2....0	ci3....ci3.....cidci7			
Thurs	31	58..62	63.63.70	29.64	S1-3....W4-5	W2-6..W4-5.W1-4	69	89	66	68	str1....cc8	0.........0			
					Force of wind	as 3.14 is to 10.					Amount of clouds	as 4.12 is to 10.			

Max. range 30.'37; min. 29.'57. 29.'91,29 mean for the month. **57°55 mean of the month. Max. range 84°; min. 30°.**

General Remarks.—3d—Spanish dagger in blossom. 5th—Wind at all points during the day, changing often. 8th—Dwarf-pear tree in blossom. 9th—Lowest mercury of barometer yet seen 29.'45. 10th—First butterflies seen. 11th—Wind at all points, westerly prevailing. 19th—8 p.m., ths. to NW.; bar. rose from 85 to 94, but though the N wind seemed near, the S. prevailed. 21st—3 a.m., wind changed to N. 23d—Wind high all night. 24th—See note below. 25th—The wind of to-day very like that of a Norther. 27th—Strawberries in market. 28th—Peculiar haze—a mist near the horizon. 30th—A large flock of wild geese going North. 31st—Locust trees in blossom.

March 24th.—From early in the morning wind E., high, with rain about 4 a.m. At 5½ a.m., bar. stood at 29.'72, but fell to 29.'56; wind E2-6 with light rain. At 6¼ ths. raining fast. 6½ bar. rose to 29.'70, wind S3.6; heavy rain with hail. At 6¾ bar. stood at 29.'67, wind S1-3, veering W. with rain; wind W1-3, rain. 7 o'clock a.m., bar stood at 29.'72, wind W2-4, with rain. 7¾, bar at 29.'73, wind W., veering N. but holding W2-4 with rain. About 9 a.m., bar. stood at 29.'67, wind W1-2 varying to S. and NW. and light; clouds dcicc10-S-10. About 10½ a.m., bar stood at 29.'79, wind S1-3 to W1-3, clounds cc1; air fine. 2 o'clock p m., bar stood at 29.'65, wind W2-5, clouds cc2, air fine. At about 3 p.m., bar. at 29.'63, wind W2-5.

The barometrical diagram of this month may be found in Oct., 1862, and also in March 1863, in reel-line, the black being that of 1863.

METEOROLOGICAL TABLE FOR FEBRUARY, 1864, AT Houston.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SNU.. RISE.	1-3 PM	SUN.. SET..	MEAN THER.	CLOUDS. A. M.	CLOUDS. P' M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Mon .	1	09. 16..	13 08 09.	30.12	N1-3....N1-2....	N0-1.NW0-1.W0-1	40	80	68	66	cistr2....ci2........	ci1..ci3...ccstr5....			
Tues.	2	13....20	..16.20.	30.17	0........N1-2....	N1-2..N1-2..N0-1	45	80	69	65	costr4....ci2	ci2..ci3...dcis3....			
Wed .	3	28..30..	23...17.	30.28	N1-2....E2-3....	E1-3N1-2E-12 S0-1	45	71	59	58	cis1....ci1	ci1..ci2...ccstr4....			
Thurs	4	05..06..	..94.95.	30.01	0....... S0-1....	W2-3.W2-4..W1-2	43	78	70	67	dcis7....ci2.........	cc1...cc2....cc1....			
Fri ..	5	03..05..	..96.94.	30.00	0....... S0-1....	W1 2........W0-1	40	78	70	63	0.........0..........	0.........0.........0			
Sat...	6	90..00..	....	......	W0-2....N1-4....	....	47				str.........0........	. ..0....0..........			
	7	10	.....06.	......	............SW1-4	..........NW0-1		70	60		..........0..........	....0....0..........			
Mon .	8	08..16..	..05.07.	30.10	0 ....S0-1....	NW0-1.S0-2..S1-2	35	79	63	59	0.........0..........	ci1....cicc2.... ccs2	frost.		
Tues.	9	07..11..	..07.08.	30.09	0........E0.1....	S1-2..E1-3...E1-3	43	75	60	59	cccci5....cc4........	ccci7....cc7.....cc8			
Wed..	10	06..08..	07...06	30.97	NE0-1...E2-1....	S1-3..........S1-2	41	72	60	58	ccs1.........0.......	0 ....0.........0			
Thurs	11	05..08..	..05.06.	30.06	SE1-3.. SE2-3....	SE1-4....... SE1-3	53	70	64	62	cc8....ccci7.........	cucc7.........dcici3			
Fri...	12	12..18..	14...14.	30.15	NE0-1..SE1-2....	....NE1-3......0	50	77	69	65	0....ci1............	cc3..............ccs2			
Sat...	13	09..11..	..04.05.	30.08	0........SE1-2....	S1-3..S1-3...S1-2	46	76	66	63	ci2....0.............	dcicccі7..ccdci8.cc8			
	14	98..04..	..92.90.	29.97	S1-2.....S1-3....	S1-3..S2-4...S1-3	60	75	70	68	ccfc6....cc10........	cc10....ccu10...ccS			....R ths ...
Mon .	15	92..00..	..95.97.	29.96	SW0.... N1-3....	W1-3..W1-2.N0-1	64	75	68	69	dcis7....ccci7.......	cicustr5.dcici.5ccci2	R		
Tues.	16	08 15..	..13.15.	30.11	0........N2-4....	N2-4..N2-3..N1-3	52	74	62	63	strci3....ci4........	ci3....cicc2...ciccs4			
Wed..	17	18..25.	..18.23.	30.22	N1-2...NE1-4....	E1-4.SE1-4..SE1-3	39	75	47	50	cccis6....dcici8	ccci4.. cicc6...ccci8			..R and sleet
Thurs	18	88..50..	49...56	30.47	N2-4....N3-3....	N2-5......NW1-3	34	49	35	39	n10....n10...........	dcin10.........ccci5	snow		
Fri ..	19	60..66..	53...48.	30.57	N1-2..N1-2..E0-1	W0-1..S1-2..W0-1	23	52	47	41	0...........0........	0.........0.......ci2	ice and frost		
Sat ..	20	22..25..	..13.13.	30.19	0........W0-1....	S2-4..S1-3...S1-4	29	63	49	50	str1....cicc2........	occi9....cc9.....cc9	ice and frost		
	21	08....14	..06.06.	30.10	0........S0-1.....	S1-2..S1-2...S1-3	45	79	68	64	cc8....ci1	cccu8....cc3..dcici4			
Mon .	22	04..09..	..05.06.	30.07	0..........S2-3....	S2-4..S1-3....1-3	46	88	71	67	0....cc1.............	cc2.....cc1.........0			
Tues.	23	08....14	..09..12	30.11	0........S1-3....	W1-2..........S1-2	50	85	68	68	0....cucc5...........	.....cucc5.....strci1	fog........		
Wed .	24	18..18..	..09..12	30.13	0........S0-1....	S0-1. S1-2...S1-4	52	86	72	70	....fc10......ci2....	ccci3...cuci3...ccci3	fog........		
Thurs	25	18..18..	..12..13	30.15	0.......W0-1.....	W0-1.SW1-2.S1-3	58	88	71	69	ccci2....fc9.........	cuccci6...ccci3...cc2	fog........		
Fri...	26	09..13..	..06..05	30.09	0......... S1-2....	SE2-3..E2-3..S1-3	48	79	67	61	ci1....cucc3.........	cccu8..cucc6...cicc6	fog........		
Sat...	27	02..06..	..96..97	30.01	0......... S2-4....	S2-4..S2-4...S2-3	58	77	68	68	cccicu4....cccu9	cccu8....cccu7...cc4	R light.....		
	28	96..04..	..97..04	30.00	S1-3..... S2-4....	S2-5..S2-5...N2-4	63	77	55	65	fcec6....cc9.........	cc10..cuci7....ccn10			...........R
Mon .	29	06..10..	..06..07	30.08	N2-4.........N2-4	N1-2..N2-4..N1-3	41	43	41	42	noc10....n10.	n10.....n10.......n10	R....R.....	...........spr	R...........
					Force of wind	as 2.24 is to 10.					Amount of clouds	as 3.76 is to 10.			

Max. range 30.'60; min. 29.'90. 30.'12.26 mean for 27 days 60°70 mean for 27 days. Max range 86°; min. 23°.

GENERAL REMARKS.—3d—Vegetation starting slightly. 4th—Smoky in the morning. 9th—Smoky. 10th—Smoky all day. 11th—Do. do. Mulberry trees starting; plums in blossom. 12th—Smoky all day, very. Peach in blossom, also cotton-wood. 13th—Smoky in the morning. 18th—Snow from 6 to 10 a.m. 19th—Highest reach of barometer yet seen—30.'66. 20th—Fears for peach and plum fruit. 26th—5 a.m., lunar halo; wood-pigeon heard. 27th—Wild geese going North.

THE

Galveston Medical Journal.

VOL. II. APRIL, 1867. No. 4.

New Instruments for Lithotomy.

BY W. H. B. GOODWIN, OF GALVESTON, TEXAS.

TREMONT DRUG STORE,
GALVESTON, APRIL 4th, 1867

Dr. Greensville Dowell:

DEAR SIR,—In compliance with your request I send you the drawings of a set of lithotomy instruments. I regret that I am neither a practical writer or artistic drawer. The staff is a little less curved than they usually are, and instead of a groove it has a finestra, or slit, five inches in length. The knife or prostatome has a blade somewhat like a plasterer's trowel, with each wing turned a little down. The beak of the prostatome has a dove-tail tenant which fits in the opening of the staff.

When the prostatome is adjusted to the staff by the bayonet-like catch it will not slip out, while the instrument is held in a line parallel with the staff. It slides easily upon the staff, with its wings looking outwards and downwards, the angular junction of the wings rests in the bottom of the finestra and slides in that space when fastened to the staff; the junction of the wings at the beak is beneath the lower edge of the groove in the staff when in position.

My friends claim that the operation of lithotomy can be more rapidly and accurately performed with these instruments than with those in common use; for, after the incision is made through the soft parts and the membranous portion of the urethra has been divided, the beak of the prostatome can be fixed to the staff, and, by one movement, made to traverse veram viam to the bladder.

When attending medical lectures in London, Professor B. Cooper attached great importance to the mode of incising the prostate gland. Dr. C. said that "the prostate gland ought to be incised in its anter, or dilated with the finger or a blunt gorget," and that "the most important portions of the operation was in traversing the prostate."

Professor Emerson also (I recollect), said, "There is great danger of missing the bladder and getting into the recto-vesicle space." Said he, "If the knife leaves for an instant the staff, all *guide is lost.*"

I never found any difficulty in reaching the staff by making an incision through the membranous portion of the urethra, but I never trusted the beak of a cutting instrument to the groove of the shallow-staff (in common use) when making an incision in the prostate and passing onwards to important textures.

I formerly passed a probe along the groove in the staff, after I had reached it, and then separated it from the staff by pressing on it, and divided the prostate at the angle of the staff and probe by carrying a small bistoury along between them. The time consumed was much greater than the time which it takes with this instrument. The operation can be performed with more accuracy with the prostatome, because that instrument will certainly follow the staff, which is fidelis costos, and the blades are formed so as to cut the prostate in its greatest diameter.

The incision will be less with the prostatome than with other instruments, because it is made to *tunnel* its way along the exact line, thereby economising the recto-versicle space, unless where calculi of large dimensions have to be extracted.

Criminal Abortion—The Social Evil.

We recently received a number of the *North American Christian Advocate* containing an article upon the above subject, with the request to notice and and send our remarks to the associate editor, Arthur Edmunds, A.M., Chicago, Ill. A few days since we received from Prof. H. R. Storer, of Boston, Mass., an article on the subject of the decrease of fecundity in America and the increase of abortions. We also have read Dr. Storer's "Why Not?" on the same subject. We must confess that we are startled at the revelations there made, and we do most heartily condemn the practice, not only on sanitary, but religious and patriotic grounds. We have often been consulted on these subjects but have always refrained from any advice on the subject, further than to protest against it.

We remember one poor girl came to us for assistance and openly declared at last her situation and with tears implored relief; but our conscience forbade us doing anything, and the result was she drowned herself in a few weeks. This and similar cases are severe trials for humane physicians, but they should always be guarded by true principles and not be decoyed away from their true course by mere sophistry. That to destroy the fœtus in utero is a crime no one will deny, but that it is really a living being until it is born and breathes, I do not believe, and all medical jurisprudence should be fixed on that point at that time alone about which there should be no controversy,

The time when fœtal life begins none can tell, not even the mother. The child may be born alive without ever being quickened in the mother's womb. That is, she may not be conscious of the fact.

A woman may believe that she has quickened and have rational signs of such quickening, and she may not even ever have had connection. Hence I hold the legal question should be finally and forever settled *that the child that breathes after parturition is a "Living Being."*

This settles one question as to the morality of abortion; we consider the principle the same, whether we consider the fœtus a living being or not. If a woman believes she is pregnant and has good reason so to believe, she is legally criminal and should be punished according to law. Religiously she is alike guilty as much as if it had become a *living being*. The doctor, quack, midwife or professional abortimist, who gives any medicine with the design of producing abortion, upon the solicitation of any woman under such circumstances, violates a law both of God and man, and departs from the principles of a gentleman.

There are other questions involved in this controversy, such as the increase of population, that is of material importance. Dr. Storer says that, owing to the peculiar tenets of the Catholic Church, millions of children are saved annually ; and while the native in Massachusetts is decreasing, the foreign population is increasing, and he attributes this to the influence of the Church alone.

The simple prevention of conception is no crime, and there may be circumstances that it may be prudent and practicable ; but it should alone be confined to the prevention of conception and should never advance beyond this point, and no resort to substances that cause congestion of the womb, such as injections, instrumental probing &c., should be resorted to. They all tend to produce dysmenorrhœa, amenorrhæa, hysteria, menorrhagia, neuralgia, &c., all of which, as well as abortion, intentional or unintentional, tend to produce permanent sterility.

From our own experience I would say that the most frequent cause of sterility was abortion. That more than two-thirds of the cases I have been called to treat was produced from that cause, and so acknowledged by the the patient, but a small number of these were intentional. In most instances the parties were very anxious for offspring, and the only reason assigned for their consultation. Were I to judge from my own experience, I would say the woman that once aborts is never afterwards sound (physiologically).

In the paper referred to in the commencement of this article there are two propositions set forth.

"I. THE ALARMING PREVALENCE OF FŒTICIDE."

This is fully proven and is beyond despute, and it is also proven very conclusively that this practice is not confined to the wicked and vicious who wish to conceal another crime, but it is practiced by the religious and conscientious to prevent too great a progeny, and that such practice is not looked on as a crime or disgrace.

Here we protest again against all such practices as immoral, immodest, irreligious and unlawful, whether before or after quickening, but not murder until respiration has taken place, but in our own opinion in the sight of God as bad, and more injurious to society, because fœticide destroys alike the life of the fœtus and injures physically the mother. Infanticide only destroys the child physically without producing any physical injury to the mother.

The second proposition :—

"II. PROCURED ABORTION IS MURDER IN SOME LEGAL DEGREE WHEN NOT NECESSARY TO SAVE THE MOTHER'S LIFE,"

must be modified. We wish to confine the word murder to the taking of the life of a *Living Being*, and not the life of a living fœtus. But this may be claimed to be a distinction without a difference. But there is a difference (not in the heart of the party implicated), for a fœticide is morally worse than the infanticide as one is injurious to the mother and child, and the other only to the child. But the destruction of an infant destroys legal rights in the body politic and implicates society generally, while the destruction of a fœtus may be considered in the light of the prevention of conception, so far as it goes, as a statistical or political proposition, and may be pardoned in those who do not desire offspring, as we pardon the *celeb.*

We cannot justify intentional abortions on any ground than in such cases as involve the mother's life. Then it is justifiable and proper for all; but should never be practiced on the plea of inability to support offspring, as poverty; to prevent the transmission of hereditary diseases, as insanity, tuberculosis, cancer, or syphilis. These parties should never marry, or they should prevent conception by mechanical means alone.

The plea of ill-health is still less justifiable, as no abortion improves but increases all and every disease. "*There is not a conceivable case where an abortion will not make it worse.*"—Storer. "*No abortion fails to do great injury to to the patient.*—Byfond. These opinions our experience confirms.

One word as to the propriety of secular papers discussing such questions. I doubt the necessity, and fear they will do more harm than good as they tend to enlighten the community upon such subjects more than they tend to prevent them; but we approve of the reprobation of papers publishing cards of advertisements tending to such practices, and recommend the rigid enforcement of the laws on this subject or the passage of others more efficient.

Registry of Births Deaths, &c.*

It was made the duty of every representative of the American Medical Association to endeavor to have passed a general registry law for their State, and in accordance with that resolution we drew up and sent to the last Legislature the following copy, which was brought before the house by Mr. Merriman, representative from Galveston, and was reported on favorably by committee, but recommended that it do not pass as our State was too new and sparsely settled. Now we spread it before the physicians of the State for their endorsement in order to affect its passage. There are many suggestions that will be of importanee to practitioners in general, and the form of reporting dlseases is that adopted by the Metropolitan Board of Health of New York, and we believe is as good as any now published.

The importance of such a law in Texas, is duly appreciated by every thinking mind, aside from its importance and value to the physician, it would be of incalculable interest to the State in many legal questions involving statutes of limitation. Everyone is aware how uncertain and inaccurate family records are kept and how easy they can be altered or changed.

We ask reports of Medical Societies on the same and opinions of individual physicians as to its necessity and importance, and any suggestions as to alterations and improvements in the copy :—

AN ACT to create a General Register Office for the State of Texas, and a "Board of Health" for each County, and a "Sanitary Commission" for every Incorporate Town and County in the State.

The Senate and the House of Representatives of the State of Texas do enact as follows :

SECTION 1.—There shall be established the office or Bureau of Registry for the State of Texas, which shall be kept and presided over by a Surgeon and Physician, to be called and designated Surgeon-General of the State of Texas, with an annual salary of——— dollars, who shall be nominated by the Governor and elected by the Senate for a term of four years.

SEC. 2.—All Coroners hereafter elected to office shall be for a term of four years, and he shall be a regular graduate of some medical school ; and shall, in addition to his present duties, be required to serve as Secretary of Board of Health or Sanitary Commission for the County in which he is elected. That, as Secretary of said Board, he shall keep an Annual Record of all Births, Marriages, Deaths, and Cases of Vaccination in registers prepared according to the forms furnished him by the Registrar-Geneaal for the State; that he shall make out a Consolidated Report of the same by the 1st day of January of each year and forward the same to Registrar-General's Office at Austin.

That he shall receive $1 for each Vaccination and twenty-five cents for each Certificate given, and twenty-five cents for the registry of each Birth, Marriage, Death, and Vaccination that he records.

It shall be his further duty to see that every individual male and female is well and efficiently Vaccinated within twelve months after birth or removal to his County; and any one failing to be Vaccinated, as hereinafter to be expressed, shall pay a fine, on conviction, of not less than twenty-five dollars nor more than fifty dollars; and the Coroner, knowing of such cases and not reporting the same, shall be fined ten dollars for each and every offence.

He shall be required to reside at the County Town or near the County Court House.

SEC. 3.—There shall be elected by the County Court of each County two regular Practicing Physicians, graduates of regular Medical Colleges, and two of their own number, who, with the Coroner, shall constitute a "Board of Health" for each County, whose powers and duties will be herein further explained.

Cities and Incorporate Towns may elect two Aldermen and two regular Practicing Physicians, graduates of regular Schools of Medicine, who, with the "Board of Health" of the County, shall constitute a "Sanitary Commission" in and for said city or town, whose duties and powers shall be the same as the Board of Health for each County. The Physicians to be elected for a term of four years, but alternate, so as one to be elected every two years. Their salaries shall be such as the County Court may, in their judgment, determine, and shall be paid out of the County Treasury from any money not otherwise appropriated.

SEC. 4.—The Registrar-General shall be required to reside at Austin, and it shall be his duty to make out and have printed the forms herein given to the Coroner of each County, and to collect the same in a general report to the Legislature at it its Bi-annual Sessions. That he shall issue such Circulars or other public documents as will secure more effectually the objects of this bill. It shall be his duty to report to the Governor any delinquent Coroners, and, upon just cause, have the same removed as herein provided.

SEC. 5.—Any five members of the Board of Health or Sanitary Commission shall constitute a quorum for the transaction of business. The words Board af Health and Sanitary Commission shall mean one and the same thing in all legal processes, and shall have the same number for a quorum. Before entering upon their duties they shall take the oath prescribed for

METEOROLOGICAL TABLE FOR DECEMBER, 1863, AT HOUSTON.

TIME.		BAROMETER. A. M.	P. M.	MEAN OF BAR.	WINDS. A. M.	P. M.	SUN RISE	1-3 P M	SUN SET	MEAN THER.	CLOUDS. A. M.	P. M.	RAINS, FOGS, &C. A. M.	P. M.	NIGHT.
Tues.	1	52, 63 ..	54, 51,52	30.56	0........E0-1....	SE2-4,SE2-4,SE1-3	28	67	53	47	0.....ci1..............	ci2.......ci2......ci3	frost and ice.		
Wed..	2	42, 47 ..	42.....38	30.43	0........E2-4....	SE2-4.......SE1-3	46	67	61	58	ci4.....cidci6..........	dcici8..........ccstr7			
Thurs	3	29, 35. ..	29, 26,27	30.30	0........SE1-3...	SE1-4.SE2-4.s2-4	46	69	62	59	ciccs3.....ccs10......	ccns9 ..cc9.....ccn10	.....spr.......		
Fri...	4	21, 25 ..	19, 19,20	30.22	0........SE1-3 ...	E1-3.E1-0........	57	70	62	63	fc10.....rfc7..........	cccun10,....n10..n10	fog.....R	R............	
Sat...	5	20, 24 ..	23, 19,22	30.23	0.......SE1-4....	NE1-3.......SE0-1	59	68	62	63	fc10.....fc10..........	ccn10..ccn10.-ccstr4	fog...........	spr R	
	6	20, 22 ..	17.....16	30.19	0........E1-3....	SE1-4..E1-4..SE-2	52	71	62	62	cccistr9.....cc4......	ccci7..ccci7...ccstr6			R............
Mon..	7	14, 16 ..	12.....09	30.12	SE1-3.....SE2-3..	SE1-3..E1-3..s1-2	55	74	69	66	cncccl6.....cnccs8....	cuccci6..cuccs8...cc7	.....spr......	shr..........	R...........
Tues.	8	20, 26 ..	18, 16,17	30.21	N0-1.....N1-4....	E1-3..E1-2..SE1-2	50	70	63	61	cc4.....cc1...........	0.........0.........0			
Wed..	9	24, 28 ..	24, 20,22	30.24	0..........N1-2...	SE2-4,.E2-5,.E1-2	39	67	56	56	0.....ci2	0........ci1........ci2	frost		
Thurs	10	17, 18 ..	13.....10	30.13	0........E2-3....	............SE1-2	41	68	57	54	ci4.....ci6	cc9.....ccci7... ccci8			
Fri...	11	98, 98 ..	93.....86	29.92	0........E1-2....	SE2-4,SE2-5,SE1-2	51	75	67	68	cc9.....fc10	cucc9..cucc6..cucc6			L NE!......
Sat...	12	75, 76 ..	70.....62	29.69	0........s1-2	E1-2..........E0-1	57	77	70	68	fc10.....ccs3	cucc5..ccci4...cidci3	fog...........		..........R
	13	67, 77 ..	84, 86,96	29.81	W2-3.....NW2-4..	SE1-3..SE1-2.E1-2	63	71	57	64	ccn9.... ccs2.........	cc1.......0.........0			
Mon..	14	05, 09 ..	07, 02,00	30.04	N2-4.....N1-3....	s1-4...........s0-1	34	65	55	51	0.....0..............	ci2.....ci1............	frost		
Tues.	15	90, 94 ..	89.....82	29.88	0........E2-4....	s1.2...........s1-2	54	67	67	61	cccn7.....cc9.........	n10.....n10.......n10	............R	R............	
Wed..	16	72, 75,79	83, 86,94	29.83	s2-5..... SW-35...	s1-2....s2-4..s1-4	69	63	48	60	ccn9....... ncc10....	ccun2......cc1 0	spr R shr....		
Thurs	17	15.....27	.. 18, 22	30.21	N1-3.....N2-4....	s1-4..W2-4. W1-3	30	49	41	40	0.....0..............	0........cc1.........0	frost and ice.		
Fri...	18	21, 33 ..	27, 26,29	30.29	0........N1-2....	..N4-9........N..	27	59	43	43	0.....cc1.............	0..........0..........0	frost and ice.		
Sat...	19	37, 46 ..	36, 36,37	30.41	0........N1-2....	..........s1-2....	29	58	50	46	0.....0..............	ci1.......ci1........ci	frost and ice.		
	20	30, 35 ..	.. 26, 27	30.31	0....... E0-1....	s2-4....s1-4......0	29	68	54	50	cistr1.....ci1........	.........cistr1.....ci1	frost and ice.		
Mon..	21	22, 27 ..	20.....17	30.22	0......... s0-1....	E1-4..SE2-4.SE1-2	34	64	57	52	cc9.....ci2	ccs8..dcis9.. dcistr9			..........R
Tues.	22	06, 07 ..	96, 94,96	30.01	0.......SE1-2	E2-4........SE1-2	53	73	59	62	ncc10.....ccn9.......	ccn9..cucc5...cucc3	R .... spr	shr..........	Lton,L NWE
Wed.,	23	92, 96 ..	.. 92, 94	29.94	0........E1-3....	SE1-2.E1-3.SE1-2	58	76	65	66	...cc10..............	cucc3.cucicc3..cistr2	fog ....R		
Thurs	24	97, 05 ..	01, 00,01	30.01	E1-3.....SE2-4....	s2-8....s1-2..s1-3	51	60	60	57	.....cccn5............	cccu8..ccstr8..ccstr3	fog....		
Fri...	25	90, 90 ..	86, 84,83	20.85	SE2-3.. SE2-4....	SE1-2..s2-4..s1-2	50	68	65	61	cc9.....cc7...........	cccu6..cccu8..... cc9			spr..........
Sat...	26	88, 93 ..	90.....03	29.88	N.2-5....N3-5....	SE3-5.E3-5..E4-6	63	69	68	66	cc9.....cc10..........	ncc10..ncc10..ncu10	.....R........	R shr	ths R........
	27	97. 06 ..	01, 00,05	30.01	0........W1-2....	NE2-4.........N1-3	39	53	42	45	cc8.....ccci5	cc2:.......ci1.......0			
Mon..	28	06.....13	.. 04, 93	30.08	0......... s1-2....	W1-2..W1-2..s0-1	31	65	59	51	0.....0..............	0..........0..........0	frost and ice.		
Tues.	29	97, 05 ..	98.....85	30.00	SE1-2.. SE1-2....	s1-4..s2-4..SE1-4	35	73	63	57	0.....cc5.............	cc4......cc5......ccs8	frost		R L to E ...
Wed..	30	83.....78	.. 64, 63	26.73	N3-5.....N2-6....	E1-3..E1-4...E01	60	60	60	60	.....n10..............	ncu10...ncc10...n10	fog R ths...	shrs.	ths..........
Thurs	31	87, 06 ..	07, 16,19	30.03	N3-5..N3-5..N3-5	N2-6..N2-6..N3-5	26	35	27	29	cc8.....cc5...........	cc3......cc3......cc3	freezing in	in the shade	all day .....
					Force of wind as 2·89 is to 10.						Amount of clouds as 4.89 is to 10.				

Max. range 30.'63; min. 29'62; 30.'08.97. 56°19' mean for the month .Max. temp. 77°; min. 26°.

GENERAL REMARKS.—1st—Very smoky. Highest mercury in bar. seen to date 30.'63. 4th—Heavy rain. 14th—Very mild norther here for the great decline in the barometer. 15th—Singular change of weather. 16th—10 a.m. ther. fell from 71 deg. to 60 deg. 26th—Norther came in after a heavy ths. at 7 p.m. 28th—Very little ice. 30th—Ths. at night, attended with sleet and hail. 31st—Snow-storm at Shreveport, La.

METEOROLOGICAL TABLE FOR MARCH, 1864, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE..	1-3P.M	SUN SET...	MEAN THER	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Tues.	1	14..24.	..17..22	30.19	N2-4....NW2-4..	N2-4.N2-5.NW1-2	85	58	50	48	ncc10....cc8	cc8.......0.......0			
Wed..	2	24..31..	..22..21	30.26	0....NW0-1	S0-1.........S0-1	80	68	60	53	0.........0	ci1......ci2......ci4	frost and ice		
Thurs	3	15..16..	..96..03	30.09	0....SE1-3	S2-4..S2-3..S1-3	35	69	60	55	cistr2... cicc3	cicc4..ccci4.cccistr5	frost		
Fri...	4	88..94..	..88..90	29.91	0....S1-4	W2-4.W2-4..N2-4	51	76	67	64	cistr8....cc7	cc7.....cc3......ci1	spr	hazy	
Sat...	5	93..97..	88.77.79	29.87	0....W0-1	W0-1..S1-2..S1-2	42	73	62	59	0.........0	0.....0 ....ci2			
	6	73..83..	75.73.76	29.78	0....SE1-3	S1-4..S1-3..S2-4	45	83	69	66	ci3....ci6	cicc7....cicc7....ci3			
Mon..	7	73..77..	74.70.71	29.74	0....S1-3	S1-3..S2-4...S1-3	61	84	71	72	cc8....cc10	ccci5....cc3....ccs2			L to N
Tues.	8	74..75..	68.62.62	29.60	S1-2....SE1-3..	SE1-3S.E2-4,SE2-3	63	69	67	70	cc10...n10	cucc8..cccicu6.ncc10	spr		L
Wed..	9	52..55..	47.45.49	29.50	SE1-4....S1-4...	S1-3..S2-4...S1-3	67	81	70	73	ncc10....cucc7	cucc9..cucc8..cucc8	R	spr.ths Nths	ths
Thurs	10	75..84..	..76..80	29.79	N2-4........N1-4	N2-5..N2-5..N1-2	50	67	60	59	cc8....ci1	ci1......ci1.....ci2			
Fri...	11	80..85..	77.73.69	29.77	0....W0-1	W1-2.NW1-2.S1-2	41	74	67	61	0.........0 ......ci1	0...... ci1.......ci1	frost		
Sat...	12	70..81..	85.85.92	29.81	S1-2..W1-4	W1-2. N1-4..N1-2	53	83	70	69	0....cc9....cc3	0.........0........ci1			
	13	08..19..	14.13.15	30.14	0....E2-4	....E2-4....E1-2	41	75	55	59	0.........ci2	....cicc5.......ccs7			
Mon..	14	20..25..	..19..22	30.22	N1-4....N2-4	N2 4...N1-3....0	52	57	55	55	ccn10....nccs10	dcicc10..ccci7...cc9	R..spr.R		
Tues.	15	29..37..	32.27.27	30.23	N2-4....N3-5	N2-4..N2-4..N1-2	43	52	47	47	ccci5....dciccs6	dci10..dcin10..ncc10			
Wed..	16	28..32..	26....19	30.25	0....N1-3	N2-4..N2-4..N0-1	36	59	53	49	strci2....0	0.........0.........0			
Thurs	17	12..15..	..02..00	30.07	0....SW2-3	SW1-3.SW13.W0-1	30	72	65	56	0.........0	0.........0......ccs1	ice and frost		
Fri...	18	00..03	17.92.93	29.97	8....W2-4	SW2-4..S2-5..S2-4	41	71	66	62	0.........0	cc1......0........0	frost		
Sat...	19	93..97..	93.87.86	29.91	0....W2-5	W2-5.SW2-4.W2-4	66	84	70	73	dci9....cc8	cc5.....cc3.....ccs7			ths NW
	20	83..84..	77.73.70	29.77	S0-1....S1-3	S2-4..S2-4...S1-3	65	75	70	67	cc10....cccu10	cucc10..cccu10 .cc10		spr	R
Mon..	21	64.61.67	68646864	29.69	NE2-4....E2-1...	N2-5N2-6E2-4N2-4	47	47	47	47	n10....n10	ncc10...ncc10...cc10	sprR	Rths	
Tues.	22	89..00..	97.93.96	29.94	N2-4....N2-3	N1-3..S1-3..SE1-2	40	69	52	52	cc10....cc7	0.......ci3.......ci3			
Wed..	23	97..01..	..94..95	29.99	E1-2....E2-5	SE2-5.SE3-5.SE2-4	44	67	57	56	cc8....ci2	cccu9....cc6...ccci7			R
Thurs	24	57736710	66.63.63	29.65	E3-6S3-6W1-3S1-3	W2-4..W2-5..S1-0	57	70	65	64	ncc10....ndci8	cc2.....cc2........0	ths hail		L to N..R.
Fri...	25	73.88.90	..87..90	29.82	W2-4....W3-4...	W1-3..W3-6.W0-1	55	70	65	64	0.........0	0.........0.........0			
Sat...	26	96..08..	05.05.05	30.02	0....S2-4	SE2-4..SE2.4S1-3	48	78	65	64	0.........0	ci1......c1........0			
	27	96.95.92	88.84.83	29.90	S1-3....S3-5,	S3-6..S1-3...S1-4	55	73	66	65	cc32....cc8	cccu9..ncc10..ncc10		spr R spr..	shrs
Mon..	28	80.88.90	88.84.85	29.85	SW1-4W2-5N2-5.N	N2-5.NW2-5.N1-2	63	70	62	65	cucc9....cc5	0.........0.........0	shr		
Tues.	29	94..00..	96....00	29.98	W0-1....N3-5	N2-6..N3-6..N1-2	46	72	65	61	0.........0	0.........0.......ci1			
Wed..	30	83..85..	75.70.68	29.77	0....W2-4	S2-5..S3-5...S2-4	43	78	65	62	ccci2....0	ci3....ci3....cidci7			
Thurs	31	58..62	63.63.70	29.64	S1-3....W4-5	W2-6..W4-5.W1-4	69	89	66	68	str1....cc8	0.........0			
					Force of wind	as 3.14 is to 10.					Amount of clouds	as 4.12 is to 10.			

Max. range 30.'37; min. 29.'57. 29.'91,29 mean for the month. 57°55 mean of the month. Max. range 84°; min. 30°.

GENERAL REMARKS.—3d—Spanish dagger in blossom. 5th—Wind at all points during the day, changing often. 8th—Dwarf-pear tree in blossom. 9th—Lowest mercury of barometer yet seen 29.'45. 10th—First butterflies seen. 11th—Wind at all points, westerly prevailing. 19th—8 p.m., ths. to NW.; bar. rose from 85 to 94, but though the N wind seemed near, the S. prevailed. 21st—3 a.m., wind changed to N. 23d—Wind high all night. 24th—See note below. 25th—The wind of to-day very like that of a Norther. 27th—Strawberries in market. 28th—Peculiar haze—a mist near the horizon. 30th—A large flock of wild geese going North. 31st—Locust trees in blossom.

March 24th.—From early in the morning wind E., high, with rain about 4 a.m. At 5⅓ a.m., bar. stood at 29.'72, but fell to 29.'56; wind E2-6 with light rain. At 6¼ ths. raining fast. 6½ bar. rose to 29.'70, wind S3.6; heavy rain with hail. At 6¾ bar. stood at 29.'67, wind S1-3, veering W. with rain; wind W1-3, rain. 7 o'clock a.m., bar stood at 29.'72, wind W2-4, with rain. 7¾, bar at 29.'73, wind W., veering N. but holding W2-4 with rain. About 9 a.m., bar. stood at 29.'67, wind W1-2 varying to S. and NW. and light; clouds dcicc10-S-10. About 10⅓ a.m., bar stood at 29.'79, wind S1-3 to W1-3, clounds cc1; air fine. 2 o'clock p m., bar stood at 29.'65, wind W2-5, clouds cc2, air fine. At about 3 p.m., bar. at 29.'63, wind W2-5.

The barometrical diagram of this month may be found in Oct., 1862, and also in March 1863, in reel-line, the black being that of 1863.

answer the same and make his defence thereto, upon reasonable notice to be given him; and, on application of the Governor, or the party charged, and Judge of the Supreme Coure shall have as full power and authority to compel the attendance and examination of witnesses, touching such charge or defence, and the production of such books and papers relating thereto, at the place and time where the aforesaid proceedings or hearing may take place, as is given herein, in respect to the examination of witnesses or the production of papers, on the application of said Board, in the fourteenth section of this act. And it shall be the duty of such Judge (and of any other Judge named in said section) to exercise such authority, and to take or supervise the taking of such examination to be used on the hearing of such charges or defence. And if, by removal or other cause, the members of the Board shall be less than five (but not less than three) the existing members shall still constitute a Board, competent, by unanimous action, to exercise the powers delegated by this act.

SEC. 14.—The President shall make reports weekly, or oftener, if directed by the Board, in writing, stating generally his own action and that of his subordinates, and the condition of public health in said district, and any causes endangering life or health that have come to his knowledge during said period.

SEC. 15.—Said Board may appoint and commission "Sanitary Inspectors," as the Board may deem needful, not exceeding fifteen, and, from time to time, prescribe the duties and salaries of each of said inspectors, and the place of their performance (and of all other persons exercising any authority under said Board, except as herein specially provided); but at least ten of such inspectors shall be physicians of skill and of practical professional experience, in said district, and the residue thereof shall be selected with reference to their practical knowledge of scientific or sanitary matters, which may especially qualify them for such inspectors. Each of such inspectors shall, during an epidemic, once in each week, make a written report to said Board, stating what duties he has performed and where he has performed them, and also such facts as have come to his knowledge connected with the purposes of this act, as are by him deemed worthy the attention of said Board, or as its regulations may require of him; and such, and the other reports herein elsewhere mentioned, shall be preserved among the records of said Board. The Board may also employ such number of clerks and servants, and fix their salaries, and take such legal advice and employ such attorneys, as may be necessary to the efficient, safe and economical discharge of the duties by this act devolved on said Board. And may may also rent, lease, fit up and furnish such offices as the convenience of the Board, its officers, agents and employees, and the prudent and proper discharge of the duties of the Board may require; and make such incidental and additional expenditure, having due regard to economy, as the purposes and provisions of this act and the dangers to life and public health may justify or require; and may provide that any failure of any officer, agent or employee of the Board to fulfill his engagements or discharge his duty, shall cause a forfeiture of the whole or any less portion of the salary or compensation of such officer, agent, or employee, as the rules or practice of the Board may provide.

SEC. 16.—Said Board shall possess all the authority and be charged with all the duties conferred by any and all the acts relative to births, marriages, and deaths. It shall be the duty of the next of kin of any person deceased, and of each person being with such deceased person at his or her death, and of the person occupying or living in any house or premises in or on which any person may die, and of the parents of any child born in said district, (and if there be no parent alive that has made such report, then of the next of kin of such child born), and of every person present at such birth, within five days after such birth or death, to report to said board in writing, so far as known, the date, ward and street, number of said birth, and the sex and color of such child born, and the names of the parents, and the age, color, nativity, last occupation and cause of death of such deceased person, and the ward and street, the place of such person's death and and last residence. And for every omission of any person to make or keep the registry required by the acts referred to in this section, and for every omission to report a written copy of the same to said Board, within ten days after any birth or marriage provided to be registered, and for every omission by any person to make the report of any death or birth, with the particulars as herein required, any person guilty of such omission shall be liable to pay a fine of ten dollars, which may be sued for and recovered in the name of said Board, for the benefit of said Board. But no person shall be liable for such fine for not making such report herein required, if he or she shall prove that such report had been made to the Board by some other person before suit brought for such penalty, or that he or she was ignorant ot such birth or death.

SEC. 17.—First,—Whenever any building, erection, excavation, premises, business pursuit, matter or thing, or the sewerage, drainage, or ventilation thereof, in said district, shall, in the opinion of said Board (whether as a whole or in any particular), be in a condition or in effect dangerous to life or health, said Board may take and file among its records what it shall regard as sufficient proof to authorize its declaration that the same, to the extent it may specify, is a public nuisance, or dangerous to life or health; and said Board may thereupon enter upon its records the same as a nuisance, and order the same to be removed, abated, suspended, altered or otherwise improved or purified, as said order shall specify; and shall cause said order, before its execution, to be served on the owner, occupant, or tenant thereof, or some of them, which, to said Board, may appear most directly interested in its execution, provided said parties, or any of them, are in said district and can be found, and such service can be conveniently made, and if any party so served (or intended to be according to this law), shall, before its execution is commenced, or within three days after such service or attempted service, apply to said Board, or the President thereof, to have said order or its execution stayed or modified, it shall be the duty of said Board to temporarily suspend or modify said order or the execution thereof, (save in cases of imminent danger from impending pestilence, when said Board may exercise extraordinary powers, as herein elsewhere specified), and to give such party or parties together, as the case in the opinion of the Board may require, a reasonable and fair opportunity to be heard before said Board, and to present facts and proofs, (according to the rules or directions of said Board) against said declaration and the execution of said order, or in favor of its modification, according to the regulations of the Board; and the Board shall enter in its minutes such facts and proofs as it may receive, and its proceedings on such hearing, and any other proof it may take; and thereafter may rescind, modify or reaffirm its said declaration and order, and require execution of said original, or of a new or modified order to be made, in such form and effect as it may finally determine.

Second,—Said Board may order or cause any excavation, erection, vehicle, vessel, water craft, room, building, place, sewer, pipe, passage, premises, ground, matter, or thing, (in said district or adjacent waters) regarded by said Board as in a condition dangerous or detrimental to life or health, to be purified, cleansed, disinfected, altered or improved; and may also order any substance, matter or thing, being or left in any street, alley, water excavation, building, erection, place or ground, (whether such place where the same may be, be public or private), and which said Board may regard as dangerous or detrimental to life or health, to be speedily removed to some proper place; and may designate or provide a place to which the same shall be removed, when no such adequate or proper place, in the judgment of said Board, is already provided. The said Board of Health, if it shall consider the public health or interests so to require, may execute such orders through its own officers or persons, and means to be engaged by the said Board of Health, and about the executing of the said orders, if the proper person or persons are known to the Board, and can be conveniently found in said district, on whom to make the service, be served upon one or more of the owners, occupants, lessees or tenants of the subject matter to which said order relates, or upon one or more of the persons whose duty it was to have done what is therein required to be done, as the case may render just and proper, in the opinion of said Board; and, if said order is not complied with, or as far complied with as the Board may regard as reasonable, within five days after such service or attempted service, or within any shorter time which, in case of pestilence. the Board may have designated, or is not thereafter speedily and fully executed, then any such order may be executed as herein elsewhere provided in regard to any of the orders of said Board. And if personal service of any aforesaid order cannot be made under this section by reason of absence from said district, or inability to find such persons therein, to be shown by the official certificate of the officer having such order to serve, then service may be made through the mail, or by a copy left at the residence or place of business of the person sought to be served, with a person of suitable age and descretion, and the expenses attending the execution of any and all of such orders respectively, shall be a several and joint personal charge against each of the owners or part-owners, and each of the lessees and occupants of the building, business, place, property, matter or thing to which said order relates, and in respect of which said expenses were incurred; and also against every person or body who was by law or contract bound to do that in regard to such business, place, street, property, matter or thing which said order requires, and said expenses shall also be a lien on all rent and compensation due, or to grow due, for the use of any place, room, building, premises, matter or thing to which said order relates, and in respect of which said expenses were incurred; and also from the time of filing, as aforesaid, a lieu on all compensation due or to grow due for the cleansing of any street, place, ground or thing, or for the cleansing (or removal) of any matter, thing or place, the failing to do which by the party bound so to do, or the doing of the same in whole or in part by order of said Board, was the cause or occasion of any such order or expense. Said Board of Health, its assignee, or the party who has under its order, incurred said expense, or has rendered service for which payment is due, and as the rules of said Board may provide, may institute and maintain a suit against any one herein declared liable for expenses as aforesaid, or against any person, firm or corporation owing, or who may owe such rent or compensation, and may recover the expenses so incurred under any order aforesaid. And only one or more of such parties liable or interested may be made parties to such action as the Board may elect; but the parties made responssble as aforesaid for such expenses shall be liable to contribute or to make payment as between themselves, in respect of such expenses and of any sum recovered for such expenses or compensation, or by any party paid on account thereof, according to the legal or equitable obligation existing between them. And it is hereby declared to be the duty of every lessee, tenant and occupant of, or in any place, water, ground, room, stall, apartment, building, erection, vessel, vehicle, matter or thing in said district, and of every person conducting or interested in business therein or thereat, and of every person who has undertaken to clean any place, ground or street therein, and of every person, public officer and Board having charge of any ground, place, building or erection therein, to keep, place and preserve the same, and every part, and the sewerage, drainage and ventilation thereof, in such condition, and to conduct the same in such manner that it shall not be dangerous or prejudicial to life or health. And in any suit in this action, or elsewhere in this act, authorized to be brought, the right of said Board to make any order or cause the execution thereof, shall be presumed. Any and every inspector or officer of said Board of Health, as the regulations of said Board may provide relative to its own subordinates, may arrest any person who shall, in view of such member or officer, violate, or do or be engaged in doing, or committing in said district any act or thing forbidden by this act, or by any law or ordinance, the authority conferred by which is given to said Board of Health, or who shall, in such presence, resist, or be engaged in resisting, the enforcement of any said orders of said Board. And any person so arrested shall be thereafter treated and disposed of as any other person duly arrested for a misdemeanor. And said Board of Health, having first entered on its minutes, or filed in its records, what it may regard as adequate proof of a violation or resistance by any person in said district, of any such law, ordinance or order, may order (by its warrant, under its seal and attested by the signature of its President and Secretary, and indicating, as far as conveniently practicable, the time, place and nature of the offence committed) the arrest of any such person, and such order of arrest shall be of the same effect and shall be executed as a warrant from a Justice or Judge, duly issued; and the party arrested shall be taken before a magistrate, and thereupon and thereafter shall by all officers, be treated as being and have the rights and liability of a party under arrest by order of the proper officer or tribunal, for a misdemeanor of the nature indicated in the said order of arrest. Proofs, affidavits and examinations, as to any matter under this act, may be taken by or before one or more members of the Board, or other person, as the Board shall authorize; and the Secretary, the sanitary and assistant superintendents and any member of said Board shall, severally, have authority to administer oaths in such matters, and any person guilty of wilfully testifying falsely shall incur all the pains and penalties of perjury.

Any Judge of the Supreme Court of any judicial district, wholly or partially within said sanitary district, or who is holding Court or Chambers therein, upon the written application of said Board or its President, to be made by or through its attorney or counsel, may issue his order by him subscribed, for the examination without unreasonable delay by or before such Justice, of person or persons, and the production of books and papers, or the inspection and taking of copies of the whole or parts thereof, at a time and place within said district, and in said order to be named; and it shall be the duty of such Justice to take or superintend such examination, which shall be under oath, and shall be signed by the party or parties examined, and be certified by said Judge, and, with any copies of books or papers, to be delivered to said Board or its Secretary, for the use of said Board. And such examination, and any proceedings connected therewith or under said order, may, wholly or in part, be had, conducted or continued by or before any other of said Judges, as well as that one thereof who made said order; and in and about the same, every such Judge shall have as full power and authority to punish for contempt, and enforce obedience to his said or other order or directions respecting the matter aforesaid (or that of any other Judge) as any such Judge of the Supreme Court may now have or shall possess to enforce obedience or punish contempt in any case or matter whatever. Such application shall name or describe the persons whose examination is sought (and, so far as possible, the books or papers desired to be inspected), and the matters or points affecting life or health in said district as to which said Board requests the same to take place, and the Judge shall, on the proceedings, decide what questions are pertinent and allowable in respect thereto, and shall require the same to be properly answered; but no answer of any person so examined shall be used in any criminal proceeding. Service of any order of any such Judge may be made, and the same proved in the same manner as the service of either an injunction or of a subpœna may now be made or proved. And it shall be the duty of all said Judges to facilitate the early determination of the aforesaid proceedings.

SEC. 18.—It shall be the duty of said Board to give all information that may be reasonably required concerning any threatened danger to the public health; and said Board shall use all reasonable means for ascertaining the existence and cause of disease or peril to life or health, and for averting the same throughout ——— district, and shall promptly cause all proper information in possession of said Board to be sent to the local health authorities of any city, town or village in this State which may request the same, and shall add thereto such useful suggestions as the experience of said Board may supply.

And it is hereby made the duty of said health authorities to supply the like information and suggestions to said Board of Health. And said Board shall keep records of its acts and proceedings as a Board, and of the execution of its orders, so far as reasonably practicable. It shall be the duty of said Board, on or before the first Monday of January in each year, to make a report in writing to the Governor of this State, through the Surgeon-General, upon the sanitary condition and prospects of said district; and may contain other useful information, and shall suggest any further legislative action or precautions deemed proper for the better protection of life and health, as well in other parts of the State as especially in said district. Such annual report may contain the sanitary rules and by-laws adopted by the Board hereby created. And the annual report of said Board shall also contain a detailed statement under the oath of the Treasurer, and a detailed statement of the manner of the expenditure during the year last past, and of the funds on hand. Said Board may annually have not exceeding one thousand copies of said report printed in an economical form, at the expense of said Board, and may distribute the same as shall be best adopted to promote the purposes of the law.

SEC. 19.—Said Board may enact such by-laws, rules and regulations as it may deem advisable, in harmony with the provisions and purposes of this act, and not inconsistent with the constitution or laws of this State, for the regulation of the action of said Board, and its officers and agents, in the discharge of its (and their duties, and for the protection of life and public health; and from time to time may alter, annul, or amend the same. And said Board shall, in like manner, before said rules and ordinances take effect, publish a "Code of Health Ordinances" for the protection of the public health in said district, to take effect on and after the first day of January next thereafter following, and to remain in full virtue, force and effect within said district for the term of one year, unless annulled; and all courts and tribunals, or any Judge or Justice thereof, shall take cognizance of and give effect to said ordinances and the several parts thereof, and may enforce such ordinances by a penalty not exceeding fifty dollars for each offence, recoverable in any Justice's or District Court, with costs; but nothing in this section contained as in any manner limiting any power herein elsewhere contained.

SEC. 20.—Said Board shall cause to be kept a general complaint book, or several such books, in which may be entered by any person, in good faith, any complaint of a sanitary nature which such person thinks may be useful, with the name and residence of the complainant, and may give the name of the person or persons complained of, and the date of the entry of the complaint, and such suggestions of any remedy as may in good faith be thought appropriate, and said books shall be open to all reasonable public examination as the Board may authorize; and the Board shall cause the facts in regard to such complaints to be investigated, and the appropriate remedy to be applied. Said Boaed may, from time to time, engage a suitable person or persons to render sanitary engineering service, and to make or supervise practical and scientific sanitary investigations and examinations in said district requiring engineering skill, and to prepare plans and reports relative hereto.

And it is hereby made the duty of all Boards, officers and agents having the control, charge or custody of any public structure, work, ground or erection, or of any plan, description, outline, drawing or charts thereof, or relating thereto, made, kept or controlled, under any public authority, to permit and facilitate the examination and inspection, and the making of copies of the same by any officer or person thereto by said Board authorized; and the members of the said Board, superintendent or assistant aforesaid, any of the aforesaid sanitary inspectors, and such other officer and person as may at any time be by said Board authorized, may, without fee or hindrance, enter, examine and survey all grounds, erections, vehicles, structures, apartments, buildings and places in said district, including vessels of all kinds in the adjacent waters, and all cellars, sewers, passages and excavations of every sort, and inspect the safety and sanitary condition and make plans, drawings and descriptions thereof, according to the order and regulations of said

Board. Said Board may make and publish a report of the sanitary condition, and the result of the inspection of any place, matter or thing in said district so inspected, or otherwise as aforesaid, so far as, in the opinion of said Board, such publication may be useful.

And said Board may provide a badge of metal, with a suitable inscription thereon, and direct and require it to be worn, in a position to be designated. by any person or officer under the authority of said Board, at such time and under such circumstances as the rules or by-laws of said board shall direct. It shall be a misdemeanor, punishable by imprisonment in the County jail, or in the penitentiary, for not less than one year nor exceeding two years, or by a fine of not less than two hundred and fifty dollars, for any person not an officer under this act, to falsely represent himself as such with a fraudulent design upon persons or property, or to have, use, wear or display any shield or other insignia or emblem such as is worn by such officer. But no more than five thousand dollars in any one year shall be expended for sanitary engineering purposes. Said Board shall hold regular and special meetings as frequently as the proper and efficient discharge of its duties shall require. And all meetings shall in every suit and proceeding be taken to have been duly called and regularly held, and all orders and proceedings to have been duly authorized, unless the contrary be proved. It shall be the duty of said Board of Health to aid in the enforcement of, and, so far as practicable, to enforce all laws of this State, applicable in said district, to the preservation of human life, or to the care, promotion, or protection of health; and said Board may exercise the authority given by said laws to enable it to discharge the duty hereby imposed; and this section is intended to include all laws relative to cleanliness, or to the use or sale of poisonous, unwholesome, deliterious or adulterated drugs, medicine or food. And said Board is authorized to require reports and information (at such times and of such facts, and generally of such nature and extent, relating to the safety of life and promotion of health as its by-laws and rules may provide) from all public dispensaries, hospitals, asylums, infirmaries, prisons and schools, and for the managers, principles and officers thereof; and from all other public institutions, their officers and managers, and from the proprietors, managers, lessees and occupants of all theatres and other place of public resort or amusement in said district; but such reports and informations shall only be required concerning matters or particulars in respect of which it may, in its opinion, need information for the better discharge of its duties in said district.

Whoever shall violate any provisions of this act, or any order of said Board made under the authority of the same, or any by-law or ordinance therein referred to, or shall obstruct or interfere with any person in the execution of any order of said Board, in pursuance or execution of the order of the Board of Health, or wilfully omit to obey any such order, shall be guilty of a misdemeanor and be liable to be indicted and punished for such offence; and in cases where it was made a misdemeanor to do or omit any act or thing, when any power or authority hereby conferred upon this Board were exercised by any other Board or officer or officers, the omission or doing of such, or a corresponding act or thing, which this act requires, or contemplates to be done or forbids, shall, in like manner, be a misdemeanor, and the offender shall be liable to indictment and punishment for the same. A wilful omission or refusal of any individual, corporation or body to conform to any regulation of said Board, duly made for the protection of life, or the care, promotion or preservation of health, or the carrying out the purposes of this act pursuant to its power or authority, shall be a misdemeanor, and the persons or officers guilty thereof shall be liable to indictment and punishment as for a misdemeanor. And all prosecutions and proceedings against any person for a misdemeanor under this act may be had or tried before any judge or tribunal having jurisdiction of any misdemeanor within which any such misdemeanor under this act was committed. And any perperson, corporation or body which may have wilfully done or omitted any act or thing which is in this act, or any law or ordinance therein referred to declared to be, or to subject the party guilty thereof to punishment for a misdemeanor, shall, in addition thereto, be subject to a penalty of two hundred and fifty dollars, to be sued for and recovered by said Board in any civil tribunal in said district, except that in the marine, or justice or county courts, no greater amounts can be recovered than the extent of the jurisdiction in other civil suits. Any any such suits may be against one or more, or each or all of those who participated in the act, refusals or omisions complained of, and the recovery may be against one or more of those joined in the action, as the justice or court shall direct. And the provisions of this section as to the jurisdiction of tribunals, parties and costs, shall apply to all suits by said Board or its assignees under this act. And said Board of Health may institute and maintain in its own name, all such suits and proceedings as shall be reasonable, necessary and proper for recovering any moneys expended, enforcing the payment of any fine, the punishment of any offence, or in other respects, carrying out the objects of this act. All processes and papers usual or necessary in the commencement and prosecution of actions, or for the collection of money, in suits or proceedings under this act, on execution may be served by any policeman, and in an about such matters the policeman so engaged shall have all the powers of marshalls, and no fees shall be charged by any court, magistrate, or clerk for the issue of any paper or process, or the performance of any duty in suits under this act. Any civil action brought under or by authority of this act shall be in the name or by the authority of said Board, and may be brought in any court, in said district having jurisdiction in any civil action, to an amount as large as is demanded in such action, and if judgment be rendered for the plaintiff in any amount, costs of the court in which such action is brought, shall also be recovered without reference to the amount of the recovery, provided payment was demanded before suit brought and the defendant or defendants in the action against whom the recovery is had did not, as the code of procedure authorizes, offer to pay an amount equal to the recovery against him or them, except that in cases where the recovery shall be less than fifty dollars, the amount of costs shall be ten dollars, and in case no recovery is had, the plaintiff shall not pay costs, unless the judge or justice at the conclusion of the trial shall certify in writing that there was not reasonable cause for bringing the action, and in such case the costs shall not exceed ten dollars, unless the amount claimed exceeds fifty dollars. No action shall abate or right of action already accrued be abolished by reason of the expiration of, repeal or amendment of any ordinance, code of health ordinances or regulation of said Board; nor shall any court lose jurisdiction of any action by reason of a plea that title to real estate is involved, provided the defendant is sought by the pleadings, to be charged in said action on any of the grounds mentioned in this act, other than by virtue of ownership of such real estate. In respect to all proofs and proceedings by said Board, or its agents or officers, under this act, papers filed shall be deemed entered upon or in the minutes of the Board.

SEC. 21.—Said Board may, by resolution, confer upon the President power to exercise, in the absence of the Board, the authority given in the fourteenth section, to temporarily suspend or modify any order or its execution. And said Board may change or modify any order made under the first clause of the fourteenth section, except that in cases where no hearing is asked for by the party affected, the order shall not be so altered as to render its effect more stringent than the original order.

SEC. 22.—This act shall take effect the first of first of January next.

[Form No. 1.]

RETURN OF STILL-BIRTH.

To the Coroner of............County.

Name of Mother..
Name of Father..
Residence of Mother..
Period of Utero-gestation. ....
Date of this Birth..
Sex ....
Nativity of Mother....................**of Father**....................
Cause (if known) ....
Name of Medical attendant..
Residence, do. ....
Name of person making this return..
Residence, do ....
Date,....................186

[Form No. 2.]

RETURN OF BIRTH.

To the Coroner of............County.

1. Full Name of Child (if any)..
2. Sex..
3. Race or Color..
4. Date..
5. Place of Birth..
6. Full Name of Mother..
   (Maiden Name)..
7. Mother's Birth-place..
8. Mother's Residence..
9. Full Name of Father ....
10. Father's Occupation..
11. Father's Birth-place..

Name of Medical Attendant..
Name of person who makes this Return..
Date....................

[FORM No. 3.]

RETURN OF MARRIAGE.

To the Coroner of............*County.*

1. Full Name of Groom..
2. Place of Residence..
3. Age..
4. ....
5. Occupation..
6. Place of Birth..
7. Father's Name..
8. Mother's Maiden Name..
9. No. of Groom's Marriage..
10. Full Name of Bride..
    Maiden Name, if a Widow..
11. Place of Residence..
12. Age..
13. ....
14. Place of Birth..
15. Father's Name..
16. Mother's Maiden Name..
17. No. of Bride's Marriage..

N.B.—At Nos. 4 and 13 state if Colored: if other races, speify what. At Nos, 9 and 17 state whether 1st, 2d, 3d, &c., Marriage of each.

.................186

We, the Groom and Bride named in the above Certificate, hereby certify that the information given is correct, to the best of our knowledge and belief.

..........................Groom.

..........................Bride.

Signed in the presence of..........................

and..........................

[FORM No. 4.]

MINISTER'S OR MAGISTRATE'S RETURN OF MARRIAGE.

To the Coroner of..............*County.*

I hereby certify, that......................and......................were joined in Marriage by me, in accordance with the Laws of the State of Texas, in the City or County of..........................this............day of................186

Witness to the Marriage,

Attest..........................

Official Station..........................

....

Residence..........................

....

[FORM No. 5.]

APPLICATION FOR A CERTIFICATE OF MARRIAGE.

..........................186

I respectfully ask for a transcript from the Coroner of...............County, relating to the Marriage of

Names..

Date of Marriage...

By whom consummated..

Name and Residence of } ....

Applicant, } ....

[FORM No. 6.]

APPLICATION FOR A CERTIFICATE OF BIRTH.

I respectfully ask for a transcript from the Coroner of...............County, relating to the Birth of

Name...

Date of Birth..

Names of Parents...

Name and Residence of } ....

Applicant, } ....

[FORM No. 7.]

TRANSCRIPT OF CERTIFICATE OF DEATH.

Of...

Date................186

Coroner's Office of...........County,

......................186

This certifies,

That it appears from the Record of Deaths in the County of...............

That...

A Native of..

and aged............... **years**,............... **months**,............... **days**,

Died at...

of...

on the............ ....day of..

one thousand eight hundred and...................

Interred in..

....

Coroner of...........County.

[FORM No. 8.]

APPLICATION FOR A CERTIFICATE OF DEATH.

I respectfully ask for a transcript from the Coroner of...............County, relating to the death of

Name ....
Date of Death..
For what purpose ....

Name and Residence of } ....
Applicant, } ....

[FORM No. 9.]

TRANSCRIPT OF CERTIFICATE OF MARRIAGE.

Of..
Date................................**186**

Coroner's Office of....................County,
..............................186

This certifies,

That it appears from the Record of Marriages, in the County of.............
That ....
A Native of..
aged.....................years,................months,.................days,
residing at..
And..
A Native of..
aged...............years,...............months,...................days,
residing at..
were married by..
on the.........................day of..............................186
at...
according to the laws of the State of Texas.

....
Coroner of............County.

[FORM No. 10.]

TRANSCRIPT OF CERTIFICATE OF BIRTH.

Of..
Date.......................................186..

Coroner's Office of ....County,
.......................186..

This certifies

That it appears from the Record of Births in the County of. ....
That the...............child,..
of Mr..
And..
was born in..
On the............................day of.................................
one thousand eight hundred and,....................

....
Coroner of..............County.

[FORM No. 11.]

CERTIFICATE OF CAUSE OF DEATH.

I hereby certify that I attended

(Name of the deceased,)..

1. Aged..........years,..........months,..........days. Born in..........

2. Occupation,........(Single) (Married) (Colored) [Cross out the words not required in this line.]

3. Term of residence in this City or County, [And how long in the United States, if of foreign birth.

4. That I last saw h....on the..186..

5. That....died the....day of............186.., at No....,........St., Ward.

6. And that the CAUSE of h....death was

a
(FIRST,)................, Existing for..........months,......days before death.

b
(SECOND,)............Beginning...........days,..........hours before death.

Place of Burial,..............................

(Undertaker,)............................(Signed),....................

(Place of Business)..............................

(Address,)..

(Date,).............................186..

[FORM No. 12.)

APPLICATION FOR A TRANSIT PERMIT.

Permission is desired to pass through the City, the remains of

Name..

Place and date of Death..

Cause of Death..

Now at..

For interment at..

How certified..

Name and Address {......................................

of Applicant. {......................................

Date.............................186..

[FORM No. 13.]

PRACTISING PHYSICIANS' REGISTER,

For the County of....................

Name.	Residence.	Nativity.	Age.	Medical School.

[Form No. 14.]

CORONER'S YEARLY REPORT TO THE REGISTRAR-GENERAL

Of Deaths occuring in............................*County, for the year ending December* 31*st*, 186 .

Months.	Date.	Name.	Men.	Women.	Boys.	Girls.	Years.	Months.	Days.	No.	Street.	Ward.	Place of Nativity.	Cause of death	Place of Interment.	Native Parents.	Foreign Parents.	Coroner's Cases.	Undertaker.	Color.	Occupation.	Physician.	Residence in City.		
																							Years	Months.	Days.

[FORM NO. 15.]

CONSOLIDATED REPORT OF DEATHS

In the County of.................. *for the year ending December* 31*st*, 186..,
to the REGISTRAR-GENERAL *of the State of Texas, by Coroner Dr*.......

FEVERS.

Typhus........................
Typhoid........................
Irritative........................
Remittent........................
Intermittent........................

SMALL POX.

Vaccinated........................
Not Vaccinated........................
Not stated........................

OTHER ERRUPTIVE FEVERS.

Scarlatina........................
Measles........................

CLASS.	CAUSES OF DEATH.	UNDER 20 YEARS.								20 and under 40.	40 and under 60.	60 and under 80.	80 and upwards.	Total at all ages.
		0	1	2	3	4	5	10	15					
I. ZYMOTIC.	**Order I.** (*Miasmatic Diseases.*)													
	1. Small Pox													
	Varioloid													
	2. Measles													
	3. Scarlatina													
	4. Diptheria													
	5. Quinsy (Tonsilitis, &c.)													
	6. Croup (Pseudo-Membranous)													
	7. Whooping Cough													
	8. Typhus Fever													
	9. Typhoid "													
	10. Erysipelas													
	11. Puerperal Fever													
	12. Carbuncle.													
	13. Influenza													
	14. Dysentery (Acute)													
	" (Chronic)													
	15. Diarrhœa (Acute)													
	" (Chronic)													
	16. Cholera (Asiatic)													
	17. Cholera Infantum													
	18. Cerebro-spinal Meningitis													
	19. Intermittent Fever													
	20. Remittent Fever													
	21. Rheumatism (see Diathetic)													
	22. Pyæmia													
	Order II. (*Enthetic or inoculated.*													
	1. Syphilis													
	2. Syphilitic Disease of the Bones													
	3. Malignant Pustule													
	4. Hospital Gangrene													
	5. Hydrophobia													
	Order III. (*Diatic.*).													
	1. Starvation (Privation, &c.)													
	2. Purpura													
	3. Scurvy													
	4. Alcoholism { *a.* Intemperance													
	b. Del. Tremens													
	Order IV. (*Parasitic.*)													
	1. Hydatids													
	2. Trichina													

CONSOLIDATED REPORT OF DEATHS.

(Continued.)

CLASS.	CAUSES OF DEATH.	Under 20 Years.								20 and under 40.	40 and under 60.	60 and under 80.	80 and upwards.	Total at all ages.
		0	1	2	3	4	5	10	15					
	3. Worms *and other Parasitic Diseases*													
II. Constitutional.	**Order I.** (*Diathetic.*)													
	1. Gout													
	2. Rheumatism													
	3, Dropsy													
	4. Cancer													
	5. Noma (Cancrum Oris, &c.)													
	6. Mortification													
	7. *Other Constitutional Diseases*													
	Order II. (*Tubercular*)													
	1. Scrofula													
	2. Tabes Mesenterica													
	3. Phthisis Pulmonalis													
	4. Hydrocephalus													
	5. *Other Consumptive Diseases*													
III. Local.	**Order I.** (*Nervous System.*)													
	1. Meningitis													
	2. Cerebritis													
	3. Softening of the Brain													
	4. Apoplexy													
	5. Paralysis (general)													
	6. Insanity													
	7. Epilepsy													
	8. Sun Stroke													
	9. Convulsions													
	10. Tetanus													
	11. *Other Diseases of the Nervous System*													
	Order II. (*Circulatory System.*)													
	1. Pericarditis													
	2. Aneurism of the Heart													
	" " Aorta													
	3. Hyperthrophy of the Heart													
	4. Valvular Diseases of "													
	5. Fatty Degeneration of "													
	6. Antrophy of the Heart													
	7. Phlebitis													
	8. *Other Diseases of the Vascular System*													
	Order III. (*Respiratory Syst.*)													
	1. Laryngitis													
	2. Bronchitis													
	3. Pleurisy													
	Hydrothorax													
	4. Empyema													
	5. Pneumonia													
	6. Asthma													
	7. Gangrene of the Lungs													
	8. *Othvr Diseases Respiratory System.*													
	Order IV. (*Digestive System.*)													
	1, Gastritis													
	2. Enteritis													
	3. Peritonitis													

CONSOLIDATED REPORT OF DEATHS.

(*Continued.*)

CLASS.	CAUSES OF DEATH.	UNDER 20 YEARS.								20 and under 40.	40 and under 60.	60 and under 80.	80 and upwards.	Total at all ages.
		0	1	2	3	4	5	10	15					
	4. Ascites													
	5. Ulceration of Intestines													
	6. Hernia													
	7. Ileus (Colic, &c.)													
	8. Intussusception													
	9. Stricture of Intestines													
	10. Fistula													
	11. *Ulcer of the Stomach*													
	12. *Pancreas Disease*													
	13. Hepatitis													
	14. Jaundice													
	15. *Liver Disease*													
	16. *Spleen Diseaee*													
	17. *Other Diseases of the Digestive System*													
	Order V. (*Urinary System.*)													
	1. Nephritis													
	2. Ischuria													
	3. Nephria (Bright's Disease.)													
	4. Diabetes													
	5. Stone													
	6. Cystitis													
	7. *Kydney Disease*													
	8. *Other Diseases of ihe Uriuary System*													
	Order VI. (*Generative System.*)													
	1. Ovarian Dropsy													
	2. Metritis													
	3. Uterine Tumor													
	4. *Uterus Disease*													
	5. *Other Diseases of the Generative System*													
	Order VII. (*Locomotooy System*)													
	1. Athritis													
	2. *Joint Disease*													
	Order VIII. (*Integumentavy System*													
	1. Phlegmon													
	2. Ulcer													
	3. *Other Diseases of the Integumentary System*													
IV. DEVELOPMENTAL;	**Order I.** (*Children.*)													
	1. Premature Birth													
	2. Preternatural Birth													
	3. Cyanosis													
	4. Spina Bifida													
	5. Other Malformations													
	6. Teething													
	Order II. (*Women.*)													
	1. Chlorosis													
	2. Childbirth (see Puerperal Fevers													
	3. Convulsions													
	4. Flooding													
	Order III. (*Age.*)													
	1. Old Age													

CONSOLIDATED REPORT OF DEATHS.

(*Continued.*)

CLASS.	CAUSES OF DEATH.	UNDER 20 YEARS.								20 and under 40.	40 and under 60.	60 and under 80.	80 and upwards.	Total at all ages.
		0	1	2	3	4	5	10	15					
	2. Senile Gangrene													
	Order IV. (*Nutrition.*)													
	1. Atrophy													
	2. Debility													
V. DEATHS BY VIOLENCE.	**Order I.** (*Accident & Negligence*)													
	1. Fractures and Contusions													
	2. Wounds													
	(*a*) Gunshot													
	(*b*) Incised													
	(*c*) Penetrating													
	3. Burns and Scalds													
	4. Poison (*By*)													
	5. Drowning													
	6. Suffocation													
	7. *Other Causes of violent death*													
	Order III. (*Homicide.*)													
	1. Murder and Manslaughter													
	Order IV. (*Suicide.*)													
	1. Wounds { Gunshot, Cut, Stab													
	2. Poison													
	3. Drowning													
	4. Hanging													
	5. *Other Modes of Suicide*													
	Order V. (*Execution.*)													
	1. Hanging													
	Sudden Deaths (cause unascertained													
	Cause not specified or ill-defined.													
	Total deaths at all ages													

Total Death from all Causes ——

Order II., comprising Violent Deaths in Military Conflicts, is omitted.

METEROLOGICAL OBSERVATIONS.

Days of the Week.	Days of the Month.	O'CLOCK, A. M.				O'CLOCK, P. M.				O'CLOCK, P. M.				Thermometer, Lowest Point, Night.	Daily Mean of Barometer.	Daily Mean of Temperature.	Daily Average of Humidity. Saturation being 100.	RAIN.	REMARKS.		
		Barometer.	Thermometer.	Evaporation Below.	Wind	Barometer.	Thermometer.	Evaporation Below.	Wind	Barometer.	Thermometer.	Evaporation Below.	Wind					Inches.	A. M.	P. M.	NIGHT.
Sunday..........																					
Monday..........																					
Tuesday..........																					
Wednesday																					
Thursday																					
Friday...........																					
Saturday.........																					

To the.................................*Board of Health.*

....

Registrar of Records and Vital Statistics.

Tetanus Nascentium.

(By J. Lewis Smith, M.D., Physician to the Infant Asylum; Physician to the Prot. Epis. Orphan Asylum, New York.)

(Concluded from March No.)

Hence the theory of Dr. Sims cannot be accepted; and yet there are few cases on record in which tetanus seemed to be due to injury received at birth. Dr. Sims has related one such case, that of a negro infant. The mistress, an observing lady, gave to Dr. Sims the following account of it:—Its head "was mightily mashed. * * * * The bones seemed to be loose. I got it to take a little boiled milk on the first day; but it swallowed very little, and very badly, for its jaws seemed to be locked. On the next day it took spasms, and got stiff all over; its hands were shut up tight, and its arms were bent up so (she placed her forearms at right angles). Every time I touched it the spasms would get worse all over, screwing up its face till it was the ugliest thing in the world; and when the spasms went off, it looked as well in the face as any new-born baby. But then the stiffness never left it, and the spasms kept coming and going till it died." It lived two days.

It is evident, from the description of the mistress, that this was a case of tetanus nascentium, commencing at, or so soon after birth, that it was really congenital. The apparent cause was injury of the head, occurring in consequence of protracted birth; the infant was resuscitated with difficulty after several minutes.

Dr. W. C. Sutton published a similar case in the *Nashville Journal of Medicine and Surgery*, April, 1843. The infant, at birth, was apparently dead, but was resuscitated so as to live eighteen hours in a state of tetanic rigidity. In these cases of congenital tetanus, doubtless, the cerebro-spinal axis is in some way affected; but, in the absence of *post-mortem* examinations, the exact nature of the injury is uncertain.

It is evident, then, that tetanus nascentium cannot be ascribed, abstractly considered, to any one cause. On the other hand, in different cases, the causes may be essentially distinct; so that the disease, as regards causation, corresponds with eclampsia in older children. Dr. James Johnson, many years ago, expressed his belief in the multiplicity of causes, and he had been a careful and intelligent observer in the West Indies.

The causes may be arranged in two groups, one external, the other internal. In the first group may be placed imperfect ventilation, personal and domiciliary uncleanliness, and atmospheric vicissitudes; in the second group, so far as ascertained, inflammation of the umbilicus and umbilical vessels, meningitis, and, rarely, injury of the cerebro-spinal axis during birth. It is highly probable that in a large proportion of cases an external and internal cause are both present, the external preceding and producing the internal, and the internal in turn producing the tetanus.

Lesions resulting from Tetanus.—The lesions resulting from tetanus nascentium, most frequently observed in those who have died of this disease, are chiefly such as are produced by the arrest of circulation, which, will be seen, occurs especially in the paroxysms.

In the cases examined by Prof. Cederschjold, of Stockholm, already alluded to, the vessels and sinuses of the brain, and the brain and spinal marrow, were gorged with blood; heart and large vessels filled with blood.

Careful autopsies were made by Finckh in the Stuttgard hospital, in twenty cases, the bodies at death having been placed on their faces, in order to prevent any deceptive appearance from the gravitation of blood. In four there was no appreciable alteration in the spinal marrow or its membranes. In the remaining sixteen there was an effusion of blood, in considerable quantity, the whole length of the spinal canal, between the bony walls and the dura mater. It should be stated, however, that there was spinal meningeal inflammation in nine of the sixteen, though the effusion of blood did not probably result from the inflammation, but from the tetanus. The blood was very dark, sometimes fluid, at other times coagulated. In one case there was no change in the appearance of the brain or its membranes; in the remaining nineteen more or less extravasated blood was found on the surface of the brain or in its interior. The substance of the brain was healthy, and also its membranes, except the congestion. The only abnormal appearance observed in the thoracic and abdominal viscera was strong contraction of some portion of the intestinal tube in five cases.

Dr. West says:—"The most frequent *post-mortem* appearance in these cases," refering to tetanus nascentium, "and that which I found in the bodies of all the four children whom I observed, consists of effusion of blood, either fluid or coagulated, into the cellular tissue surrounding the theca of the cord. Conjoined with this there is generally a congested state of the vessels of the spinal arachnoid, and sometimes an effusion of blood or serum into this cavity. The signs of congestion about the head are less constant, though much oftener present than absent, and sometimes existing in an extreme degree; while in one instance I found not merely a highly congested state of the cerebral vessels, but also an effusion of blood, in considerable quantity, between the skull and dura mater, and also a slighter effusion into the arachnoid cavity. Dr. Weber, of Keil, also placed infants who had died of tetanus on their faces, and, without exception, found injection of the capillaries of the cord and spinal meninges, and extravasation of blood. M. Matuzynski,. according to Bouchut, "has observed effusions of blood, of variable quantity, in the cerebral pia mater, in the ventricles, and in the choroid plexuses, with considerable injection of the membranes of the brain. He has also seen serous infiltration beneath the arachnoid, and serous effusion into the ventricles, accompanied by a diminution of the consistency of the cerebral substance." In two cases examined by myself, there was intense injection of the cerebral meninges and of the meninges of the upper part of the spine, but no extravasation was noticed. The spinal canal was not opened.

Dr. H. O Wooten (*New Orleans Medical and Surgical Journal*, May, 1846,) states that he has made several *post-mortem* examinations, and has found the pathological appearances as uniform as in any other disease, as follows:—Engorgement of the substance of the brain, and of the meninges lining the base of the brain, the medulla oblongata, and spinal marrow; liver congested.

In a case related by Dr. Imlach before the Edinburg Obstetrical Society, April 24, 1850, the upper part of the lungs was health, the posterior portion congested, and containing many dark points; heart and liver healthy; small intestines of a light brown color; stomach and large intestines pale (there had been umbilical hemorrhage).

Romberg states that he found in a child, who had died of tetanus nascentium, much intense congestion of the veins and sinuses of the brain, that a slight touch, and the removal of the cranial bones, produced extravasation of the partly coagulated and partly fluid blood. Dr. Scholler, on the other hand, found actual extravasation of blood in the spinal canal in only one case in eighteen.

It is seen that while in some cases tetanus nascentium produces no sensible change in the condition of the viscera and vessels, it ordinarily causes great passive congestion, especially of the vessels of the cerebro-spinal meninges, and often extravasation.

Symptoms.—In many cases premonitory symptoms are absent, or are so slight as to escape notice. Sometimes there is a degree of fretfulness previously, but no more than is often seen in those who continue in good health. The first symptom which alarm the parents, and shows the grave nature of the commencing disease, is inability to nurse, or evident pain and hesitation in nursing. Commencing with rigidity of the masseters, the disease gradually extends to the other voluntary muscles, and in the course of a few hours the muscles of the limbs as well as of the trunk are involved. Persistent muscular contraction, which is the pathognomonic feature of the disease, is gradually developed in each affected muscle, so that it is not till after the lapse of several hours, perhaps even a day, that the greatest degree of rigidity is attained. Therefore, in the commencement of the disease, the limbs can be bent, and the jaws pressed open, by using a little force, though with manifest pain to the infant.

During the period of maximum rigidity, the jaws are fixed almost imovably, often with a little interspace between, against which the tongue presses, and in which froth collects. The head is thrown back, and held in one position by the stiffness of the cervical muscles. The forearms are flexed; the thumbs are thrown across the palms of the hands, and are firmly clenched by the fingers; the thighs are drawn towards the trunk; the great toes are adducted, and the other toes flexed. Occasionally opisthotonos results from the extreme contraction of the dorsal and posterior cervical muscles. The infant has sometimes been raised without any yielding of the muscles by one hand under the occiput and the other under the heels.

The rigidity is liable to variation in its intensity, even after the full development of the disease. If the infant is quiet, especially if asleep, the muscles are partially relaxed, to such an extent sometimes, in the first stages of the complaint, that the features have a placid and natural expression, though only for a short time. There are also frequent exacerbations in the muscular contraction, sometimes occurring without any apparent cause, and they are produced by anything which excites or disturbs the child. Attempts to open the lips, or jaws, or eyelids, or to bend the limbs, blowing on the face, or even, sometimes, the alighting of a fly causes the paroxysm.

During the paroxysm the eyelids are forcibly compressed, as well as the lips, which are either drawn in or are pouting; the forehead and cheeks are thrown into wrinkles, and the physiognomy is indicative of great suffering. The unnatural positions of the trunk and limbs, which result from the muscular contraction, are increased for the moment; the head is more forcibly thrown back, and the limbs more strongly flexed. The muscular movements, which occur during the paroxysms, are often called clonic spasms. There is, indeed, occasionally some quivering of the limbs, and yet, as I have on different occasions noticed, so far from being clonic spasms the tonic character continues, and is merely intensified. In fatal cases, as the disease adavnces, the paroxysms occur more frequently until the period of collapse or exhaustion is reached.

There is not in tetanus nascentium any loud crying of the child, however great the suffering. The cry is variously stated by different writers as "whimpering" or "whining." It is of this suppressed character, from the fact that the respiratory muscles are so affected as to render impossible those strong and rapid respiratory movements which are necessary in full utterance of the voice.

During the exacerbation respiration is suspended or rendered imperfect, and the circulation is retarded to such a degree that general capillary congestion results. The surface becomes of a deep red, almost livid appearance. Sometimes epistaxis occurs as a relief to this congestion, and sometimes, though less frequently, the blood forces itself from the congested liver along the umbilical vein and escapes from the umbilicus. We have already alluded to the rupture of the capillaries so often observed within or upon the cerebro spinal meninges.

The frequency of the pulse and respiration varies somewhat in different cases, and at different stages of the same case. They are often somewhat accelerated, but at other times are natural or are even slower than in health.

While the appetite of the infant, to appearance, is not diminished, the pain which it experiences in nursing is such that alimentation is necessarily deficient. It can be fed with a spoon for a time after it ceases to take food in the natural way, but artificial feeding soon fails. The milk placed in its mouth is, to a considerable extent, pressed back through the violence of the spasm, which is induced by the attempt to feed it.

In consequence of imperfect nutrition the infant rapidly wastes away. There is no other disease, except the diarrhœal affections, in which emaciation is so rapid. In a case related by Dr. W. B. Lindsay, in the *New Orleans Medical Journal*, Sept., 1846, the record states that "the infant was fat three days before, but was now emaciated." Romberg, whose knowledge of tetanus nascentium is derived mainly from European hospitals, and Dr. Robt. H. Chinn, of Texas (*Orleans Medical and Surgical Journal*, Sept., 1854), both speak of the rapid emaciation. The trunk and extremities lose their fulness, and the features become pinched. Several observers have noticed the appearance of miliaria in this reduced state of the system, especially around the shoulders, and sometimes a decidedly icteric hue appears on the skin.

The condition of the bowels is not uniform. Often they are loose, particularly if the disease is due to some irritation in the bowels; in other cases they are natural or constipated.

It is often difficult to ascertain the state of the eyes, since attempts to open the eyelids bring on spasms, and cause firm compression of the lids against each other. According to Sir Henry Holland one of the first symptoms which occurred in the cases on the island of Heimacy was strabismus, with rolling of the eyes. But this statement must be received with caution, since these cases were not seen by any physician, and the information was obtained from the parents and priests. If true, the proximate cause of the disease in Heimacy would seem to be located in the cerebro-spinal axis. I have seen the pupils contracted in the stage of collapse.

Mode of Death.—Death in tetanus nascentium may occur from asphixia in the paroxysms, from extreme congestion of the cerebral vessels, or apoplexy; and lastly, it may occur from exhaustion. The last mode is probably the most frequent.

Prognosis.—All writers agree that tetanus nascentium rarely terminates favorably. Cullen attributes the ignorance of physicians, in reference to it, to the fact that it is so little amenable to treatment that they are not usually summoned to attend those affected with it. In the island of Heimacy, of one hundred and eighty-five cases, occurring during a series of years about the commencement of the present century, not one survived, and in the same locality, at a more recent period, according to the report of Dr. Sschlesner already alluded to, sixty-four per cent. died. Similar testimony, in regard to the mortality of trismus nascentium, is given by physicians in the Southern States. Dr. H. O. Wooten, of Alabama, says (*New Orleans Medical Journal*, May, 1846) that he has "never seen a decided case of tetanus nascentium that did not prove fatal, * * * and it is very generally deemed useless to call in medical aid after the initiatory symptoms are well declared." Mr. Maxwell, speaking in reference to the West Indies, says, (*Jamaica Physical Journal*, copied into the *London Lancet*, April 11th, 1835): "From observations, which I have made for a series of years, * * * I found that the depopulating influence of trismus nascentium was not less than twenty-five per cent. It scarcely has a parallel within the bills of mortality." Dr. D. B. Nailer (*New Orleans Medical Journal*, Nov., 1846) says: "About two-thirds of the deaths among the negro children are from this disease, and so uniformly fatal is it that a physician is never sent for."

Yet death does not always result. Eight of the forty cases in my collection recovered, but a correct opinion cannot be formed from this of the actual ratio of favorable to unfavorable cases, since recovery is so remarkable that favorable cases are much more likely to be published. In the histories of these eight cases two interesting facts are noticed, which, when present, may serve as a ground for hope of a successful termination. These were the age at which the disease began, and fluctuation in the symptoms. With two exceptions these infants were about a week old when the initiatory symptoms appeared, and there were fluctuations in the gravity of the disease; whereas fatal cases ordinarily grow progressively worse. Yet in favorable cases the symptoms are never so severe as they become in a few hours in those who succumb.

Duration in Fatal Cases.—Of eighteen cases observed by Finckh, in the Stuttgard Hospital, fifteen died in two days, two in five days, and one in seven days. During the epidemic in the Stockholm hospitals, in 1834, where forty-two cases were treated, the disease seldom lasted more than two days. Romberg says:—"It generally lasts from two to four days, but its duration is at times limited at from eight to twenty-four hours, and occasionally, though rarely, it extends from five to nine days."

In thirty-one fatal cases in my collection in which the duration is mentioned—

One lived	three hours.
Eleven others lived	one day or less.
Twelve " "	two days.
Four lived	three "
Three "	four "

Both Underwood, who published a little treatise on diseases of children in 1789, and Dr. Elsasser, at a more recent date, record fatal cases which were unusually protracted. The one described by Underwood was treated in the British Lying-in Hospital, and although all the others treated in this institution died by the third day, this lived six weeks; but it is suggested by the author that death was due, in part, to some other affection. The child treated by Elsasser lived thirty-one days.

Duration in Favorable Cases.—In the eight favorable cases in my collection the duration of the disease, reckoned from the time when the infant ceased nursing till it began again, was as follows:—In one case, two days; in one, a few days; in one, fourteen days; in two fifteen days; in one, twenty-eight days; in one, thirty-one days; and in the remaining case, about five weeks.

Diagnosis.—A physician, in one of the Southern States, some years ago expressed the belief that tetanus nascentium is often not recognized by practitioners in the northern part of the Union, so that it is more frequent with us than would appear from the bills of mortality. This is in a measure true. I have known it to occur in this city, and its true character not be suspected, although the means of diagnosis are more patent and reliable than in most other infantile affections. Permanent rigidity of the voluntary muscles, with temporary exacerbations, such as have been described above, induced by attempts to open the mouth or eyelids, is pathognomonic.

Preventive Treatment.—While tetanus nascentium, if fully developed, is ordinarily fatal in spite of any remedial measures heretofore used, there is no doubt that great benefit may be gained by preventive measures in localities where the disease is common. This was shown by the great reduction in mortality in the Dublin Lying-in Hospital through the thorough ventilation introduced by Dr. Clarke. Dr. Meriwether, of Montgomery, Ala., says (*American Journal of Medical Sciences*, April, 1854):—"When the disease appears endemically on a plantation, it may be arrested by having the negro houses whitewashed with lime inside and out, by raising the floors above the ground, by removing all filth from under and about the houses, by particular attention to cleanliness in the bedding and clothes of the mother, and in the dressing of the child, so as to prevent any of the matter from the umbilicus lying long in contact with the skin." Many physicians, especially in the Southern States, speak confidentially of care in dressing the cord and attention to the umbilicus as a means of prevention. In the *New Orleans Medical and Surgical Journal*, July, 1853, Dr. Grafton says that he has "never known the disease to occur in any child whose naval had the turpentine dressing. He uses turpentine as follows:—"At the first time a few drops of the undiluted turpentine is applied immediately to the umbilicus around the cord, and it is annointed at every succeeding dressing, the turpentine being diluted one-half or two-thirds with olive oil, lard or fresh butter." This use of turpentine has also been recommended by other practitioners in the warm regions.

Dr. John Furlonge, of St. John's, Antigua, believes (*Edinburg Medical and Surgical Journal*, Jan., 1830) that no case would occur with the following treatment;—"The cord when divided should be wrapped in clean linen. Every night for two weeks one or two drops of tinct. opii and spts. vini, equal parts, should be given, and castor oil with a little magnesia every morning. The child must be washed in tepid water every morning and the funis dressed." If this treatment is attended by the success claimed for it by Dr. Furlonge, so great care is certainly well repaid where a large proportion of the infants die of tetanus as at Antigua.

Some experienced observers go so far as to assert that it is possible to ward off the disease after the occurrence of symptoms which they believe are premonitory. Dr. Dowell says (*American Journal of the Medical Sciences*, January, 1863):—"Some with slight twitchings of the muscles have recovered without any trouble, by being put in a mustard bath, washed clean, and put in a clean and well-ventilated cabin."

Treatment.—In considering the treatment of tetanus nascentium, the great difficulty which the child experiences in swallowing should be borne in mind. Without care, a considerable part of the dose is lost by the spasm of the muscles of deglutition, which ordinarily occurs when the spoon is placed in the mouth; so that, without special attention to this matter, it may be uncertain whether the dose ordered is actually administered in full.

The treatment adopted by different physicians in this disease has been very diverse. Antiphlogistic remedies were employed by Finckh, but every case so treated was fatal. He states that whenever blood was extracted, even in small quantity, the symptoms were aggravated. The result in the practice of other physicians, who have resorted to depletion, has been equally unsatisfactory.

The internal remedies which have been most frequently prescribed are opiates and antispasmodics. Furlonge, in a favorable case, gave laudanum in doses of one drop every three hours, alternately with two grains of Dover's powder. Woodworth also gave one-drop doses of laudanum; Eberle, one-sixth of a drop hourly. The opiate has generally been given in combination with an antispasmodic. The Dover's powder, given every three hours by Furlong, was combined with five grains of sulphate of zinc. The hourly doses of laudanum, by Eberle, were combined with six drops of tincture of assafœtida.

When anæsthetics began to be employed in the treatment of diseases, it was believed that they would be especially useful in cases of tetanus. Accordingly, chloroform has been used in tetanus nascentium, with the effect of controlling the spasms during the time of its use, but without curing the disease. In case 7, in the first table, it was employed several times, but apparently without delaying the fatal result. The editor of the *New Orleans Medical and Surgical Journal* states, in the May issue of that periodical for 1853, that he has used chloroform in tetanus nascentium, with the effect, he believes, of prolonging life. Anæsthetics certainly relieve the suffering of the infant, and on this account, even if they do not prolong life, their careful use is proper.

The administration of alcoholic stimulants is required, at short intervals, on account of the rapid emaciation and great prostration.

Local treatment directed to the umbilicus, in those cases in which there is evidence of inflammation of the umbilicus or umbilical vessels, should not be neglected. Vesication of the umbilicus, and the application of poultices to it, so as to promote discharge, have been followed by unquestionable benefit, if we may believe the statement of some observers who have made use of these measures. Dr. Meriwether, of Alabama, says, if there is no improvement from the medicine which he orders, he applies a blister larger than a dollar to the umbilicus, and with this treatment the child generally improves; a remarkable statement, since so few improve at all.

A warm foot-bath, repeated at intervals of a few hours, and stimulating embrocations along the spine, are proper adjuvants to the treatment.

In order to show what combinations of medicines have been used in favorable cases, we will mention briefly the treatment of the patients in our second table :—

Case 1.—Warm water and laudnum to umbilicus.—Magnes. calcinat, scruple j.; tinct. assafœt. gtt. lx.; tinct. opii gtt. xx.—M. Dose, 20 drops, occasionally. Sweet oil applied to the limbs.

Case 2.—Took magnes. calcinat. on the first day. 4th day, quin. sulph gr. iij.; morph. sulph. gr. ss.; axung. drachm j. to drachm ij; applied to navel. 5th day, tepid bath every three hours; castor oil dressing to umbilicus. 6th, same treatment continued, and from this time gradually recovered.

Case 3.—2d day, a large warm poultice to abdomen. R.—Tinct. cannabis Indic. drachm ij; aq. camphor oz. ij.—M. Dose, one teaspoonful every two hours. 3d day, treatment continued. 4th day, give same medicine every hour and a half. 5th and 6th days, treatment continued. 7th day, give same dose hourly. From this time recovered.

Case 4.—2d day, warm bath; poultice to abdomen. R.—Tinct. cannabis Indic. oz. ss; syr. pruni virgin. oz. j. ss.—M. Dose, one teaspoonful every two hours. 3d day, dose, one teaspoonful hourly. 4th, 5th and 6th days, treatment continued. 7th day, dose, one teaspoonful every half hour. 8th, 9th, 10th and 11th days, half an ounce cannabis given daily. From this time recovered.

Case 5.—3d day, blister two inches square to umbilicus, also blister to occiput. Hyd. chlor. mit. gr. iij., followed by castor oil. R.—Tinct. opi-gtt. $\frac{1}{6}$; tinct. assafœt. gtt. vj.; hourly. 4th and 5th days, treatment continued; is improving. 6th day, omit other medicine; give castor oil. 8th day, symptoms worse; blister to umbilicus. Give tinct. opii and tinct. assafæt. as before. R.—Hyd. chlor. mit. gr. ij., to be given with rhubarb and followed by castor oil. From this time gradually recovered.

Case 6.—At first castor oil internally and warm applications externally, then a dose of calomel and jalap; a warm bath every three hours. 2d day, tinct. opii gtt. j. every three hours; frequent applications of warm laudanum to the jaws; turpentine and mercurial ointment to be applied to the navel, from which the cord has dropped; the nape of the neck to be blistered, and the following powder to be given between each dose of the laudanum:—R. —Pulv. Doveri gr. ij.; zinci sulph. gr. v. 3d day, some improvement; a small quantity of camphor to be added to each powder; the blistered surface to be dressed with turpentine and mercurial ointment. This course of treatment was continued more or less regularly for three weeks. On the 10th day he took one grain of calomel and half grain of James's powder. During the entire sickness only three grains of calomel were administered.

Case 7.—This child recovered without medicine, being kept on the side, so as to remove pressure from the occiput.

Case 8.—Recovered without treatment, except the use of mild laxative powders in the beginning of the disease.

It is probable that some of the remedial measures made use of in the foregoing cases were useless, and they may occasionally have been positively injurious; but as, in therapeutics, experience is our only safe guide, it is our duty to examine carefully the treatment of those who recover in a disease so generally fatal as tetanus nascentium. It is obvious that a physician called to a case should attempt to remove all those agencies or conditions which are known to produce tetanus nascentium, or at least to favor its development, and which, when present, may serve to aggravate the disease. This requires attention to the state of the bowels and umbilicus, to cleanliness of the infant, of the bed and room, and to ventilation. It is only when this is done that we can hope for any good result from the internal and local treatment recommended above.—*American Journal of the Medical Sciences*, October, 1865.

Dr. Thomas Addis Emmet.

We regret that our printer left out the name of this distinguished physician and surgeon of the Woman's Hospital, New York, in the republication of his paper on "Reduction of an Inverted Uterus of Eight Months' Standing." Dr. Emmet was the pupil and assistant and now is the successor of Dr. Marian Sims in the Woman's Hospital, New York, and has, perhaps, the greatest practical experience in his specialty of any man of his age. He is most untiring in his labors, and frequently operates for four or six hours at a time. He is the inventor of a new form of Sims' speculum, it being self-adjusting, or rather self-retaining. He is a native of Charlottesville, Va., and educated at the University. He has bright prospects before him, and we wish him a long and prosperous life.

Bibliographical Notices.

Infantile Paralysis and its Attendant Deformities—By Charles Fayette Taylor, M.D., Resident Surgeon New York Orthopœdic Dispensary, author of "Mechanical treatment of Angular Curvature of the Spine," "Spinal Irritation; or, causes of back-ache among American Women;" "Theory and Practice of the movement cure," etc. From J. B. Lippincott & Co., publisher, Philadelphia, 1867. Can be ordered through J. E. Mason, stationer and bookseller, Galveston, Texas.

A useful and practical work, well illustrated, and should be in the hands of all surgeons who have under their care cases of club-foot. as the treatment is both physical and mechanical and the pathology well and instructively given.

Contributions to the Pathology, Diagnosis aud Treatment of Angular Curvature of the Spine—By Benjamin Lee, M.D. J. B. Lippincott & Co., publishers, Philadelphia, 1867.

This work approves the treatment of curvatures of the spine with mechanical supports and without the use of setons, moxas, &c. Its diagnosis is good, giving as the first and most important symptom gastralgia. It treats the subject in a reasonable and sensible way.

Washington Medical Register.—From Dr. Toner, editor and publisher.

We have made some extracts from this work in our last number, which were not fully credited to the author. Dr. Toner is now engaged in writing an American Medical Biography.

Books, Pamphlets, and Journals Received.

Catalogue of Dolbear's Commercial College, New Orleans; founded, 1832.

Catalogue of University of Nashville Medical Department, Session 1866–7, and Announcement 1867–8.

Fourteenth Annual Report of the Pennsylvania Training-School for Feeble-minded Children.

On Excision of the Superior Maxillæ; by same.

Observations upon the Statistics of Chimbarazo Hospital; by S. E. Habersham, M.D., of Augusta, Ga.

On the Inhalation of Atomized Fluids; by H. Beigal, M.D., L.R.C.P.—from Goodman & Shutleff, Boston.

Prof. H. R. Storer upon the American as compared with Foreign Fecundity; from author.

Perineal Urethrotomy; by W. R. Whitehead, M.D., New York—from author.

Remarks upon the Compound Fractures of the Thigh; by S. E. Habersham, M.D.—from author, Augusta, Ga.

The Twenty-fourth Annual Report of the Mount Hope Institution, near Baltimore, for the year 1866; by W. H. Stokes, M.D.

Treatment of the Lower Jaw; by Thomas Brian Greening, New York—from author.

Vol. IV., No. 4, Quarterly Summary of the Transactions of the College of Physicians of Philadelphia, for Feb. 4, 1862, to April 6, 1864, inculsive.

Vol. IV., No. 2, do. do., from June 1, 2864 to Feb., 1866, inclusive—from Librarian.

JOURNALS REGULARLY RECEIVED:

Atlanta Medical and Surgical Journal.
Boston Medical and Surgical Journal.
Buffalo Medical and Surgical Journal.
Braithwaite's Retrospect
Detroit Review.
Medical and Surgical Reporter.
Medical and Surgical Monthly, Memphis.
Medical News and Library.
Methode Conffaint-Langenfcheidt. Zeitschrift fur practische. Heilkunde.
Medical Reporter.
New York Medical Journal
Richmond Medical Journal.
Southern Medical and Surgical Journal; Price $5. Augusta, Ga.
Southern Journal of the Medical Sciences.
St. Louis Medical and Surgical Journal.
The Medical Record, New York.
The Savannah Journal of Medicine.
The Medical Reporter, (St. Louis).
The Dental Cosmos.
The American Journal, new series.
University Journal of Medicine and Surgery.

METEOROLOGICAL TABLE FOR APRIL, 1864, AT HOUSTON.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SUN RISE..	1-3P.M.	SUN SET...	MEAN THER	CLOUDS.		RAINS, FOGS, &C.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P. M.	A. M.	P. M.	NIGHT.
Fri...	1	87..96..	..92..91	29.91	NW2-5..N2-4....	N2-5..N2-4..N1-3	49	73	65	62	cicc3....ci1	0... ci1....cc1...			
Sat...	2	87..91..	86.76.74	29.82	0....S2-6	S3-6..S3-5...S2-5	47	77	66	63	0....ci1	ci1 ...ci1....ci1...			
	3	57..68..	..64..73	29.65	S2-4....S1-4.	W2-4.NW3-6.W1-3	63	83	69	72	fcc9....n10	cc2.....0.........0	.....R.....		
Mon..	4	87..97..	..94..93	29.92	N2 5 ...NW2-5..	NW2-4NW2-4W0 1	49	71	65	72	0......0	0.........0.........0			
Tues.	5	95..02..	97.92.92	29.97	0....E1-3	SE1-0.SE2-5. S2-4	43	76	63	61	0......0	0.........0			
Wed..	6	85....94	..88..89	29.89	S1-2....S2-4.	S2-4...S1-3. E1-3	55	72	65	64	ciccstr3....cc10.	ccn10..cc10.. ccsci5		R....R	
Thurs	7	88 86..	81.72.72	29.79	0....SE1-2.	SE1-3.SE1-3..S1-0	64	76	73	72	....fcc10	ccn10....cccu8.. cc8	fog, spr R...		ths
Fri...	8	93..00..	97.93.94	29.96	NW1-3.N3-5.N3-5	NW2-5.N2-4.N1-2	51	70	63	61	str2....ci1	str1......0.........0			
Sat...	9	95..00..	97	... .	NW1-2....W3-5..		46	..	..	..	0......0				
	10				Wind southerly	at Galveston.	wea	th	er	fine	clouds, mostly cc3-8				
Mon..	11	....03..	00 ...93				..	..	..	..					
Tues.	12	....10..	..05..04			....N1-3.......0	..	79	75	..		.......cccu8....ci2			
Wed..	13	05..06..	01.96.95	30.01	E1-3....E2-4....	E2-4..E2-4.. E1-2	65	72	65	67	cc6....cc9	cc10....cc10....cc1			ths R
Thurs	14	90..03..	..96..98	29.96	N1-3....E1-3....	N1-4..N1-3..N1-3	57	69	59	72	cc10....dcicc8	ccdci9..dcicc8..dci8			
Fri...	15	99..03..	..96..95	30.00	0....W1-3	W2-4.W1-4..W1-0	45	67	60	57	0... cistr2.	cccucci6....cc3.....0			
Sat...	16	97..04..	..96..96	30.00	0....W1-2	W1-3..E2-4..E2-1	44	78	69	64	0....cc1	cicc2...... cc2.....0			
	17	97..96..	..01..02	30.01	0....S2-4.	S3-5...S2-5...S1-3	58	84	72	71	0. 0	0.........0.........0			
Mon..	18	06..14..	14.12.12	30.10	S1-2....W1-3....	E1-3..SE1-3..S0-1	61	85	77	74	cistr2....cicc3	cc3.....cc2.....cis3			
Tues.	19	15..20..	17....10	30.15	NE1-2....E1-3...	SE1-3.........S1-2	58	78	69	68	ci2....0	0................ci2	fog.		
Wed..	20	02. 05..	02.95.95	30.00	0....S1-3.	S2-4...S2-5...S1-4	55	78	67	67	....cc1	0.........0.........0		.....spr....	
Thurs	21	85..94..	92.90.91	29.90	E1-2....SE3-5 ...	SE3-5.SE2-5 SE1-3	63	78	68	70	ccci3....cc8	cecu7..cccu7..ccdci7		R	....ths.....
Fri...	22	92..93..	93.89.87	29.90	S1 2....S3-5.....	SE1-4..E2-4..SE1-3	68	72	67	69	cc8....cc4	ccn10...ccs10...ccs2	....R....		
Sat...	23	90..96..	05.03.05	29.93	0....SW1-3	N2-5..N3-5..N2-4	60	60	58	59	cc10....n10.	cc9. ....ci2..... ci			
	24	08..10..	08.00.00	30.05	W1-2....W1-3...	SW1-3.SW1-3.S2-4	45	73	63	60	0......0	0.........0 ......ci1			
Mon..	25	98..05..	05.02.02	30.01	0....SW1-3	S1-3..S1-4...S1-3	50	83	70	67	0......0	0.........0......... 0			
Tues.	26	05..08..	08.06.06	30.02	S1-2....S1-3	S1-3...S2-4..S1-3	66	80	72	73	cc10....cc8.	cc9.....cc8......cc7	spr		
Wed..	27	03..06..	04.99.98	30.07	S1-2....S1-4.	S2-4...S2-4..S2-4	67	81	73	74	ccn10....cc7	ccu7.. .cccu8....cc9			
Thurs	28	95..99..	97.95.94	29.96	0....S2-4	S2-4...S1-3..S1-2	68	76	73	72	cc9....cc10.	cc10....cc10.....cc6			
Sat...	29	00..04..	04.02.01	30.03	E1-2....SE2-4...	S2-4..S2-4..SE1-2	67	81	73	74	cc7 ...cccu10.	ccci5.....ci2.....ci1			
Fri...	30	02..06..	05..02..	30.04	0....S1-3	S1-3....W1-3....	67	75	66	66	ccs8....ccn10.	ccu10....n10	..spr	spr.ths	
					Force of wind	as 3.13 is to 10.					Amount of clouds	as 4.00 is to 10.			

Max. range 30.'20; min. 29.'57. 29.'96,58 mean for the month. 66°69 mean for 26 days. Max. range 85°; min. 43°.

General Remarks.—5th—Hazy all day. 7th—8 to 9 p.m., ths with hail; wind N., NW., and W. 9th—Leave for Galveston. 11th—Green peas in market—Houston. 14th—China trees in blossom. 16th—First swallows observed. 23d—Fine rains. 25th—Dewberries in market. 26th—Fire-flies first observed. 29th—Snap-beans in market. 30th—Mosquitoes appearing.

METEOROLOGICAL TABLE FOR MAY 1864, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SNU.. RISE	1-3 MP	SUN.. SET..	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &c. A. M.	RAINS, FOGS, &c. P. M.	RAINS, FOGS, &c. NIGHT.
	1	04..10..	..02..03	30.06	N2-4....N1-2....	NW2-4..NW1-2..0	58	73	70	67	ccci6....ccn10	cc6......c31.....ci4			
Mon..	2	08..09..	09.05.06	30.09	0....NE18'......	N1-3...N1-0....0	52	81	75	69	cistr2....0	cc1.....0.........ci2			
Tues.	3	05..09..	09.05.06	30.07	0....E2-4	SE2-4.SE2-4..SE1-	56	76	67	66	ci2 ...ci1	cc2.....0.........ci1			
Wed..	4	04..10..	..07..06	30.07	0....SE2 4	SE2-4..S2-5..S2-4	63	80	69	71	ccci3....cc4	cc5....cccu6...ccci5			
Thurs	5	05..11..	12.08.09	30.08	0....S2-5	S3-5...S2-5..S2-4	60	80	69	70	ccs3....cc6	cccu6....cucc7..cc8			
Fri...	6	06 10..	12.09.06	30.09	SE1-2....S2-5....	S2-5...S2-4..S2-4	65	72	70	70	ccci4....cccu10	cccu10 ccdci9 dcicc10		spr.	
Sat...	7	00..03..	02.97 97	30.0[illegible]	S1-3....S2-4,	S1-3...S2-4..S2-4	69	76	70	72	cc9....ncc10	ncc10..cccu8..cucc3	R....R—.		
	8	92..96..	94.88.86	29.91	S -3....S2-4	S2-5...S3-5..S2-4	68	76	70	71	ccn9....ccu10	cc10....cc10.....cc9			
Mon..	9	82..84..	83.72.74	29.78	S1-3....S2-3	S2-5...S3-5..S2-4	69	79	72	73	n10....cc7	cucc9..cucc8....n10	R	spr R	
Tues.	10	75..82..	82.80.87	29.81	S1-2N1-2 W1-2.SW	W2-4..W2-5.N2-5	71	86	73	77	ccdci6 ...cccu5	cc2.........0........0	spr L		R..
Wed..	11	04..07..	08.04 0[illegible]	30.05	N2-4....N2-5	NW2-4. NW2-4..0	52	74	69	65	0.......0	0...........0..... ci1			shrs.
Thurs	12	98..05..	00.95.91	29.98	0....S1-3	S1-3N1-3N1-3.NW	47	80	75	77	0 ...ci1	ci2.......ci1.......ci1			
Fri...	13	86..91..	87 83.81	29.86	0....W1-3	S1-2...S1-3..S1-3	53	87	77	72	cistr3....cicc3	cidci3....ci3.....ci4			
Sat...	14	78..83..	82.79.80	29.81	0....SW1-2	S1-3...S1-3..S1-3	60	80	74	71	dciccs6....ccci8	ccdci8..dcici7...cc8			
	15	85..92..	93.92 90	29.89	0....W1-3	SE1-3.SE2-4..S1-2	65	85	75	75	cc3....cc3	cccu3..cucc2....cc1			
Mon..	16	94..97..	97.95.92	29.95	0....S1-3	S1-3...S2-4..S1-3	65	84	75	75	....cccu6	cucc8....cucc2..cc1	fog....		
Tues.	17	90 95..	91.83.82	29.88	0....SE13	SE2-4..S2-5..S1-3	66	83	76	75	cc7....cc4	cucc8.... cucc2....0			
Wed..	18	80..85	83.80.79	29.82	SE1-2....S2-4....	S2-4...S2-4..S1-3	67	87	77	77	cc6....cucc7	cucc5....ccci3...cc1	fog—light...		
Thurs	19	88 .06..	95.90 91	29.92	0....S1-3	S1-3...S1-3..S1-2	71	86	79	79	ccs5....cucc7	cucc5..cucc4 .custr2			
Fri...	20	96..00	99.95.94	29.97	0....S1-3	S2-4...S1-3 S1-3	67	89	79	78	... ccci2	cc5......cc2.....cu1	fog		
Sat...	21	95....00	..96..93	29.97	0....S1-3	S2-4...S2-4..S1-3	68	88	79	78	fcc10....ci1	cucc6.....cc2......0			
	22	93..00..	99.97.98	29.96	0....S2-4	S2.4...S2-4..S1-3	64	84	74	74	ci2....cccicu8	cuci6...cicc4... ci2			
Mon..	23	00 05..	05.02.99	30.02	0....S1-3	SE2-4.SE2-4. S1-3	64	86	76	76	custr2....cu5	dcicu9dcicucc8cistr4			
Tues.	24	02..05..	03.96.91	29.98	0....S1-3	SW2-4W1-3N0-1.S	67	89	79	78	fc7....ccci4	cucc7...cucc4....ci1			
Wed..	25	90.92.90	..83 80	29.86	0....W1-3...S2-4	S2-4W2-4S2-4 S1-4	67	93	80	80	custr2....cc9....ci1	cccu6....cucc5...ci1			
Thurs	26	84..77..	83.80.81	29.81	NE0.1....S2-4...	S1-2...S2-4..S2-4	71	91	79	80	cc9....cc5	ccccicu5cudci8cidci4			
Fri...	27	86..95	94.88.91	29.90	0....E1-3	S2-4...S2-4..S1-3	69	90	80	80	cc8....ccci5	cicc2....cicc2....ci5			
Sat...	28	98....09	..05..06	30.04	N1-3....N2-5....	E2-4....E2-4...0	71	78	72	73	ccdcistr7....cc10...	cidcicc5..cidci7..ci3	R		
	29	08..12..	10.06.06	30.09	0....NE1-3	N1-4 ...N1-4..0	63	86	79	76	ci3....cccuci3	dcicc8.dcicc7..cidci4			
Mon..	30	05..06..	06.01.97	30.01	NE1-2....E1-3...	SE1-4.SE2-4.SE1-3	62	88	79	76	cicc5....ccci5	ccci5...cicc8...cicc5			
Tues.	31	96..99..	99.98.05	29.97	0....SE2-4	SE2-5.W3-6.NE1-2	65	82	70	72	cicc7....cucc9	cidcicc7 ci4.dcicistr7	......spr ths	ths W.ths .	

Force of wind as 2.93 is to 10.

Amount of clouds as 4.40 is to 10.

Max. range 30.'12; min. 29.'72. 29.'95.71 mean for the month 73°61 mean for the month. Max range 93° ; min. 47°.

General Remarks.—7th—Irish potatoes in market. 22d..Plums in market. 24th—7 to 8 p.m., heavy cu, with L to E. 27th—Tomatoes in market; 7 to 8 p.m. thL to N. 28th—9 a.m., ther at 68°, 31st—Okra in market.

METEOROLOGICAL TABLE FOR JUNE, 1864, AT Houston.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SUN RISE.	1-3P M	SUN SET.	MEAN THER.	CLOUDS.		RAINS, FOGS, &C.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P' M.	A. M.	P. M.	NIGHT.
Wed.	1	96..98..	..94..93	29.96	W1-3....S0-1....	S2-4.SE2-4..SE1-3	71	83	78	77	cistr2....ci2........	ci1..ci3...ccstr5....	spr..........	....	....L to W.
Thurs	2	97. 01..	95.93.93	29.97	0....S1-2.......	W1-4..S2-4..S1-3	71	85	76	77	ccstr4....ci2........	ci2...ci3...dcis3....	fog.Rths...	....ths	ths.NW.....
Fri..	3	96.97 96	95.90.88	29.92	0....SW1-2.....	SW2-4..S1-4.E1-2	73	88	74	78	cis1....ci1..........	ci1..ci2...ccstr4....	....	ths.S&W R	Rths .N & W
Sat...	4	90.95.94	90858485	29.90	0....S1-3........	SW1-3.S2-4.SW1-3	72	78	79	80	dcis7....ci2.........	cc1...cc2....cc1....	fog..........	....	....
	5	85....88	84.80.80	29.84	W1-3....S1-4....	S2-4.SE1-3..SE1-2	74	98	74	78	0..........0..........	0.........0.........0	ths S......	ths..........	....
Mon.	6	85..87..	85.87.85	29.86	SE1-2....S2-4...	S2-4W2-4N2-5E2-4	74	88	69	77	str........0..........	...0....0...........	....	ths near ths	..........R
Tues.	7	88....00	..93..94	29.94	SE1-3..S2-4..N2-5	N1-2..E1-2..N1-2	73	70	74	73	..........0..........	....0....0..........	ths.shrs R.	R	R--L..L...L
Wed..	8	97..00..	92.97.98	29.99	0....S2-4.......	S2-4..S2-4...S1-2	70	86	78	78	0.........0..........	ci1....cicc2.... ccs2	....spr.....	R.... shr..	th L to NW
Thurs	9	01.04.04	00.92.93	29.98	0..W2-5....W1-3	W1-2..S2-4..S1-4	74	85	79	77	ccccci5....cc4.......	ccci7....cc7.....cc8	R	....	....
Fri...	10	95..97..	96979087	29.93	0....S2-4.......	S1-3.W2-5.S2-4..0	73	78	75	75	ccs1........0........	0 ....0.........0	........shrs	ths..........	....
Sat...	11	96.93.94	90.94.88	29.92	N3-5..SE2-4. S2-4	S2-4..N2-5..SE2-4	72	82	70	75	cc8....ccci7........	cucc7.........dcici3	ths.........	spr R ths	ths.........
	12	92..96..	95.93.91	29.93	0.....S1-2.......	S1-2.SW1-2.SE1-0	68	83	81	79	0....ci1..............	cc3 ....ccs2	....	ths.	...L to NE..
Mon.	13	93..98..	96.93.92	29.95	0....SE1-2......	SE1-2.SE1-3.SE1-3	75	90	81	82	ci2....0..............	dciccci7..ccdci8.cc8	....	....	....
Tues.	14	90. 95..	91.86.87	29.90	0....SE1-3......	SE1-3.SE1-3.SE1-3	76	90	80	82	ccfc6....cc10.......	cc10....ccu10... cc5	shr. SE.....	shr..........	....
Wed..	15	93..96..	95 92.93	29.94	0......S1-4.....	W1-3.N1-2..SE2-4	73	90	80	81	dcis7....ccci7......	cicustr5.dcici.5ccci2	....	....	L to W & S..
Thurs	16	95..96..	97.94.94	29.96	0......S1-3......	S1-3...S2-4...2-4	73	90	81	81	strci3....ci4........	ci3....cicc2...ciccs4	....	....	L to E.. ...
Fri..	17	95..00.	98.97.99	29.97	0......S1-3......	W1-3.SE1 3.SE2-4	72	89	81	81	cccis6....dcici8	ccci4.. cicc6...ccci8	....	....	....
Sat..	18	97..01..	01.97.96	29.99	0.....W1-3......	S1-3...S1-3..S1-3	71	90	82	81	n10....n10..........	dcin10..........ccci5	....	....	....
	19	96..00..	00.93.94	29.97	0......S1-3......	S1-2...S1-3..S1-3	72	93	86	84	0..........0..........	0..........0........ci2	....	....	ths NW. dis..
Mon.	20	96..01..	02.96.02	29.99	0....NE1-3.......	E1-3NE1-2SE1-2.E	74	96	73	81	str1....cicc2........	ccci9....cc9.....cc9	....	....ths..ths	ths S & SE..
Tues.	21	97..04..	03.96.96	30.00	0....SE1-3.......	SE1-3.E1-3.SW1-3	69	92	80	80	cc3....ci1	cccu8....cc3..dcici4	....	....shs..ths	....ths.....
Wed.	22	96..01..	99.96.97	30.98	0......S1-3.......	S2-4..S1-3.NW1-3	72	83	79	78	0....cc1............	cc2.....cc1.. 0	spr..........	..ths.NW..	....
Thurs	23	04..07..	07.06.05	30.06	0......S2-4.......	S1-4E2-5S1-2SE1 3	72	85	73	77	0....cucc5..........	....cucc5.....strci1	........ths	....ths.shrs	....
Fri...	24	08. 13..	13.10.09	30.11	0......E0-3......	SE1-3.SE1-3.E1-2	72	80	77	76	....fc10.....ci2...	ccci3...cuci3.. ccci3	ths.R......	....	....
Sat...	25	12....17	..15 15	30.14	E0-1..E1-3........	SE2-4.E-2-4.SE1-3	71	88	78	79	ccci2....fc9.........	cuccci6...ccci3.. cc2	....	....	....
	26	14..17..	16.13.13	30.15	E0-1....E1-3....	SE2-4..SE1-3....	71	89	77	79	ci1....cucc3.........	cccu8..cucc6.. cicc6	R..........	R.shrW....	....
Mon.	27	13..15..	..09..09	30.11	E0-1....SE2-4...	SE1-3.SE1-3. S2-4	71	88	81	80	cccicu4....cccu9 ...	cccu8....cccu7.. cc4	....	....	....
Tues.	28	09..15..	14.09.11	30.12	0......SE1-3. ..	SE1-3.SE1-3.SE1-3	72	88	80	80	fccc6....cc9.........	cc10..cuci7....ccn10	....shrsW.	....	....
Wed.	29	13....17	..15..14	30.15	0......SE1-3....	S2-4...S1-2..S1-3	71	82	79	77	ncc10....n10........	n10.....n10.....n10	........shr	....	....
Thurs	30	13..15..	14.09.09	30.12	0....S1-3. SW2-5	S1-3.SE1-3..SE1-3	71	91	81	81	ci1....ci2...........	cc4....ccn6.....ci0	....	....	....

Force of wind as 2·59 is to 10.

Amount of clouds as 2.59 is to 10.

Max. range 30.'17; min. 29'80; 30.'99.16 mean for the month. 78°80' mean for the month. Max. temp. 96°; min. 68°.

General Remarks.—2d—Shrs. in vicinity p.m. 3d—Shrs. in vicinity all day. 6th—4 to 6 p.m., heavy ths coming from N. W. and E., wind principally N. 7th—Abundant and timely rains. 9th—Green corn in market, ther. about 9 a.m., at 68°. 12th—Butter-beans in market. 13th—The rains since May 31 are said to be general, yet none at Galveston. 18th—Water-melons, from Galveston—$30 to $50 each, Confed. cy. 19th—Peaches in market—$10 each, Confed. cy. 20th—Shrs. all around from 6 to 8 p.m. 22d—Ther. at 12 m. stood at 85°; at 2 p.m., at 72°. 26th—Light shrs. around from 9 a.m. to 2 p.m.

METEOROLOGICAL TABLE FOR JULY, 1864, AT HOUSTON.

TIME.		BAROMETER A. M.	BAROMETER P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN. RISE	1-3P M	SUN. SET.	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Fri...	1	98..12..	09.08.06	30.09	0....SE1-3	S1-3.SE1-3. SE1-3	72	90	82	81	ci2....cccu4	cucc4..cccuci5...ci2			
Sat...	2	07..10..	08.06.05	30.07	0....SW1-3	E1-3..SE1-2. S1-2	74	78	78	77	cicccustr8...cucc8..	cucc8.cccu7.cicustr	....R.	ths R.	
	3	04..07..	04.00.96	30.02	0.. .S1-3	SW1-4..S1-3.S1-2	73	85	82	80	custr1....cu6	cuci7..cuci7.cicucc8		spr ths	
Mon .	4	00..06..	06.01.00	30.03	0....S1-3	SW1-3.SW1-4.S1-3	72	92	82	82	cc1....cucc5	cucc5..cuci5...cicc2		shr W.	
Tues.	5	05..10..	07....04	30.07	0....2-4	S2-4........S1-3	78	92	82	82	0........cc8	cccu4....ci1			
Wed .	6	05..09..	07....06	30.07	0.		78	85			ci1				
Thurs	7	....05..	05....99		Barometrical ob by Mr. Stanley during my absence.	Winds generally Southerly and light.		90			Clouds during my absence generally cu or ci with some cc and str.				
Fri ..	8	....07..	08....06					86						spr.	
Sat...	9	....17..	15....18					89						spr.	
	10	....17..	16.					91							
Mon .	11	....13..	05....06					91							
Tues.	12	....09..	10....06					92							
Wed..	13	....08..	14....07					89							
Thurs	14	....09..	07....08					90							
Fri ..	15	....04..	04....99					94							
Sat...	16	....07..	08....03					92							
	17	....07..	97.					92							
Mon .	18	....08..	07....04					95							
Tues.	19	....06..	05.					90						shrs..shrs.	
Wed..	20	03..07..	99.00.00	30.03	0....E1-4	SE1-4..E1-2.N0-1	74	86	75	73	cc2... cucc10	cucc8..cuci4...cicu3	ths.	ths.	
Thurs	21	06..09..	08....06	30.08	0....E1-3	SE0-1.........0	72	84	82	79	cc9....cuci8	cucc8..........cicc8	R	R	
Fri...	22	07..13..	12.05.07	30.09	0....W1-3	W1-3..S1-2..N3-5	73	92	76	80	cuci2....cu5	cu4....cu5....cucc1		....ths.	ths.
Sat...	23	07..09..	08.06.05	30.07	0....E1-3	N1-3..NE1-2...0	72	90	83	82	cucc8....cistr4	cucc5....cu4....cc3			
	24	06..08..	06.05.04	30.06	NE1-2....E1-3..	N1-3.. NE1-3...0	69	83	80	77	cicc7....cc8	cucicc8.cccuci7cucis			
Mon .	25	02..07..	06.04.03	30.05	N1-3....E2-4	E2-4...... SE1-3	71	88	80	80	cccustr6... cc7	.....cc.......cccistr4		hazy.	
Tues.	26	04..08..	08.06.05	30.06	0....NE1-3	E2-4....N1-3...0	66	87	81	78	cistr1....ci2	dcicc8....cccu7....0			
Wed .	27	06..08..	08.06.07	30.07	N0-1....E1-3	NE2-4......SE1-2	71	88	81	80	ci8....dcici5	ccci7........cicustr5			
Thurs	28	07....10	..07..06	30.08	N0-1....SE2-4	E2-4..E2-4..E1-3	73	89	79	79	ciccs6....cc8	cccu8....cc9...cccu8		spr.	
Fri.	29	05..10..	06.05.03	30.07	E1-2....S1-2	SE1-3..S1-3..S1-2	74	82	81	79	cuccci8....ncc10	ccci7..ccci4....ccu7	ths.		
Sat...	30	03..05..	04.96.96	30.00	0....S2-4	S2-4..S2-4..S1-3	75	88	82	82	cucc5....cucicc6	cuci7..cccu8...cicc5		ths S.	
	31	97....01	..96..94	29.98	S0-1....S2-4	..S2-4......S1-3	75	92	84	84	cistr3....cuci5	.......cuci6....cicd2			
					Force of wind	as 2.42 is to 10.					Amount of clouds	as 5.08 is to 10.			

Max. range 30.17 ; min. 29.'94. 30.'05.50 mean for 18 days. 80°00 mean for 17 days ; max. temp. 94°. min. 69°

GENERAL REMARKS.—2d—Ther. at 90° about 10 a.m. 18th—9 to 10 a.m., ths. at Crockett. 19th—The shrs. noted were on the C. R. R. between Hempstead and Cypress City. 21st—Sweet potatoes in market. 22d—5 p.m., a gale. 26th—Hazy all day. 27th Hazy till noon.

CATALOGUE
OF THE SESSION OF 1866-7,
AND
ANNUAL ANNOUNCEMENT
OF
GALVESTON MEDICAL COLLEGE
FOR THE SESSION OF 1867-8.

TRUSTEES:

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R. H. HANNA, M.D., *Demonstrator of Anatomy.*

THE REGULAR COURSE OF LECTURES

will begin on the First Monday in NOVEMBER, 1867, and close on the First Wednesday of MARCH, 1868.

CATALOGUE OF MATRICULANTS.

NAMES.	POSTOFFICE.	PRECEPTOR.
Angell, Edwin P.	Galveston	Dr. Angell
Beaumont, Alex. G.	LaGrange	Dr. Allen
Beaumont, G. B	Indianola	
Boring, Isaac A.	Galveston	Dr. Boring
Burroughs, Samuel R.	Centreville	Dr. Kirksey
Camp, W. W.	Panas, Mexico	
Clarke, Benj. F	Galveston	
Dowell, G. A.	Memphis	Dr. Dowell
Few, Ignatius S	Henderson	Dr. Galloways
Gahan, Myles J.	New Brunswick	
Gambill, G. H. P.	Washington co	Dr. Gantt
Gantt, Edward S.	Chappell Hill	Dr. Gantt
Hodges, J. B.	South Carolina	
Howell, John W	Plantersville	Dr. Neely
Harper, T. C.	Shelby co	
Hutchins, John F.	Columbus	Dr. Tolina
Kiefer, Frank	Brenham.	
Morrison, J. H.	Courtney	Dr. Jamison
Norton, J. M.	LaGrange	Dr. Allen
Osborne, Wm.	Marlin	
Pearson, W. H.	Rusk	Wright & MoDugald
Pratther, John C.	New Salem	Dr. Jamison
Simms, J. O	Chappell Hill	Dr. Gantt
Steele, Jas. S.		
Stewart, Thos. H.	Georgia	
Threadgill, W. T.	Courtney	
Towsey, S. A.	Galveston	Practitioner
Wilkinson, C. H.	Galveston	Dr. Dowell

LIST OF GRADUATES.

The Degree of Dr. of Medicine was conferred on the following gentlemen:—

NAMES.	THESIS.
Angell, Edwin P	Avoidable Causes of Disease.
Beaumont, Alex. G	Typhoid Fever.
Camp, W. W	Typhoid Fever.
Clarke, Benj. F.	Diptheria.
Few, Ignatius S	Rubeola.
Gahan, Myles J.	Digestion.
Gambill, G. H. P.	Physiological Anatomy of Liver.
Gantt, Edward S.	Membranous Croup.
Harper, T. C.	Anatomy and Physiology of Liver.
Hodges, J. B	Menorrhægia.
Howell, John W	Medical Science—General and Special.
Kiefer, Frank	Masturbation.
Morrison, J. H.	Inflammation.
Pearson, W. H.	Natural Labor.
Steele, Jas. S	Malarial Fever.
Stewart, Thos. H.	
Towsey, S. A.	
Threadgill, W. T.	Dysenteria.
Wilkinson, C. H	Epedemica Cholera.

◆◆◆

HONORARY DEGREE OF M. D.

The Honorary Degree of M. D. was conferred on the following gentlemen:—

Stewart, Thos. H., Georgia.
Perkins, J. P., Chappell Hill, Texas.
Stanley, S. F., Fairfield, Texas.

VALEDICTORY, by Prof. J. Boring.

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" Medical Journal (Monthly)	5.00	9.00
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THE

Galveston Medical Journal.

VOL. II. MAY, 1867. No. 5.

Green or Black Jaundice.

[ACUTE JAUNDICE WITH HÆMATURIA.]

BY D. M. MORRISON,[*] M.D., OF WHEELOCK, ROBERTSON CO., TEXAS.

Some years ago, whilst engaged in a somewhat desultory practice in one of the Mississippi River parishes of north Lousiana, I was occasionally called to cases characterized by *sudden and intense jaundice and hæmaturia*, which, from their novelty, fatality and tendency to become more prevalent each succeeding year, attracted my serious attention. Since then, having been driven by the "logic of events" (*alias* ravages of war) to a situation on the Brazos River, in the central portion of this State, I find the same disease making its appearance here, with like promise of increase as in the district above mentioned, and hence this writing.

What the disease under consideration is I really do not know, unless it is what Dr. Wood, in his valuable Practice of Medicine, cursorily speaks of as "green or black jaundice." I will, therefore, give the symptoms in extenso, and the reader can make his own diagnosis:—

The attack comes on suddenly in the midst of good health without premonitory symptoms, or intercurrently with intermittent fever, and is, I believe, *invariably* ushered in with a chill, which, in different cases, is of very variable duration and intensity; being sometimes so slight as to be scarcely perceptible, at others so severe as to amount to a rigor. As frequently as otherwise there is a repetition of the chill in three or four hours, after which, in a majority of cases, it does not again recur throughout the whole attack. In exceptional cases, it returns in regular quotidian or tertian form (particularly the lattter), and it is worthy of remark that these are more amenable to treatment than ordinary cases. A single instance came under my observation in which the chill returned at *irregular* intervals, varying from one to six hours; this one also resulted in recovery.

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[*] MR. EDITOR.—Enclosed please find a monograph, which you are at liberty to publish if you think it worth the while. I am aware that it is incomplete and otherwise imperfect; but, as my object is to ELICIT rather than to IMPART information, I will accomplish my purpose if I can invest the subject with sufficient interest to call forth a response from the profession.

With wishes for the prosperity of both you and your bantling MEDICAL JOURNAL, I am, with much respect,

J. M. MORRISON.

After a subsidence of the cold styge, the usual phenomena of mild febrile reaction, viz.:—a moderately hot but perspirable skin, thirst, furred tongue, a slightly accelerated pulse, &c., &c., manifest themselves.

Except in the cases in which the chills recur *regularly*, the fever is strictly continuous, having no appreciable apyrenia or remission whatever. The first time the patient has occasion to urinate, after the initiatory symptoms of the disease make their appearance, he voids a bloody-looking fluid, which is perfectly homogenous when passed, and does not, upon standing, show any disposition whatever to separate into a deposit and clear supernatant liquid as is commonly the case with hemorrhagic urine. So invariably an attendant is this peculiar character of urine, that it may be called *pathognomonic*, if, indeed, it is proper to so designate any symptom of disease. It need not be apprehended by those who are so fortunate as to have never seen the disease, that I have confounded this with the saffron, deep-brown or blackish colored urine of ordinary jaundice, as the two differ widely not only as regards their appearance but likewise in reference to their behaviour with reagents.

White linen dipped into the urine of black jaundice is stained the color of venous blood, whilst nitric acid and ebulition) either alone or conjointly) precipitate from it a marvelous quantity of albumen; in fact, nine-tenths of the whole mass of the urine instantly geletanizes. No green or pink colors, however, show themselves under the use of this acid, nor when added to urine previously acidulated with muriatic acid, do those yellowish-green, green, blue, violet and red colors appear, which are commonly understood to indicate the presence of bile. When tested with chloroform no important change of color is observable. Mixed with sulphuric acid and sugar, *a la* Pettenkofer, no purple-violet color appears. Having no microscope, I am unable to say whether or not any blood-corpuscles are discoverable in the urine, but am much inclined to the belief that there are.

In a period of time, varying from one to twenty-four hours from the first chill, a slightly yellowish discoloration makes its appearance about the angles of the mouth, nose and in the conjunctivæ, which, *in a few hours*, regularly diffuses itself over the entire body, and likewise becomes gradually intensified into a deep lemon color. If the case is to terminate fatally, not unfrequently the color is further changed into a deep bronze, and all the secretions of the body then become tinged more or less with the same color. In one instance I recollect to have seen the secretion from the Schneiderian membrane of an inky black appearance, which, however, when spread into a thin lammina on white paper, discovered its true color to be a very dark bottle-green.

The disease prevails at any and all seasons of the year, but preferably in the fall, just antecedent or subsequent to a sudden elevation or reduction of atmospheric temperature. No age, sex, condition of life or race seems to enjoy any immunity from it except the negro, who is almost entirely exempt from it. It is neither infectious nor contagious, and, as was to be expected, one attack is no receipt whatever against it for the future; in fact, an individual who has once had it is much more liable to it than one who never did.

It is a curious, and may some day become an instructive, fact, that hogs and the horned variety of cattle, particularly cows, are sometimes scourged with an epidemic disease, the most characteristic features of which are intensely yellow discoloration of the skin, tallow and cellular tissue, bloody urine and wonderful fatality. I have sought, but in vain, to find some connection between the disease as it exists in man and in the lower order of animals; but it is not impossible that the time may come when it will be demonstrated that the former in one way or other contracts it from the latter (as in trichina and trichinosis), or vice versa.

It runs its course rapidly, a crisis being reached in most cases in from one to five days. I have known several persons previously healthy to die of it within twenty-four hours after the first symptoms manifested themselves. Recovery is not usually preceded by a tardy convalescence; the patient generally gets well in about the same length of time and in the same way as after an attack of ordinary remittent fever.

I am aware that if this paper possess any merit whatever that it is much abridged by the fact, that I am unable to give any account of the anatomical characters presented by the disease. It would have afforded me much pleasure to make post-mortems, if permitted to do so, but in the country the prejudice against such a proceeding is so great as to have effectually barred me from this field for investigation. From the rapidity however with which either death or recovery sometimes takes place, I am much inclined to the belief that the lesion is one of function rather than structure. Mortality in the disease ranges from thirty to forty per cent.

What the true pathology of the disease is I am unable to say; but from its general features, together with the fact that it does not (at least that I am aware of) prevail in other than malarial districts. I believe that the materies morbi is of miasmatic origin, and that its effects on the organism are such as to produce an entire suppression of secretion of bile. Some of my confreres, however, for whose opinions I have much regard, hold that the disease is produced by some mechanical obstruction to the free exit of bile, per vias naturales, and its consequent reabsorption into the system. Were this a question of mere curiosity or theoretical speculation, I would "pass it by as the idle wind which I regard not;" but as it is a problem the proper solution of which must play a material part in the important matter of treatment, I trust that a discussion of it *en passent* may not be considered *mal a propos*.

Those who favor the obstruction theory adduce many plausible reasons in its defence, by far the most cogent of which, probably, is the fact that when bile is injected into the veins of the lower order of animals, albuminous and bloody urine is sometimes produced as shown by recent experiments of Kuhne and others. This result, however, is not a constant one, (Frerichs found it to fail twelve times in twenty-nine), and in the cases in which it does occur, the albumen and blood are associated in the urine, with bile pigment and bile acids, neither of which latter is to be found in the urine of patients suffering from black jaundice; or, if so, I have been unable to manipulate reagents with sufficient nicety to demonstrate even the slightest trace of them. This result harmonizes well, too, with the statement of Lehman that no trace of bile pigment or cholic acid can be found in the urine of patients suffering from true granular liver, in which there can be but very imperfect, if any, secretion of bile. The similarity, then, of the two urines (if I may so speak) is not so great after all. When it is recollected that most of the bile secreted in health is destined for reabsorption in the prima viæ, it will be difficult to understand how any impediment to its entrance into the duodenum can produce death in so short a time, as it not unfrequently takes place in black jaundice. Again, if bile is ever reabsorbed into the blood, why is it that chemico-physiologists, for whose fame even a continent is too small, are unable to demonstrate its presence in that fluid? Most indubitably for the obvious reason, that there is none of it in it.

If an obstruction to the free flow of bile into the duodenum is sufficient to produce hemorrhagic and albuminous urine, why is it that occlusion of the ductus communis choledochus by artificial means, billiary calculi, &c., is very seldom, if ever, followed by this character of urine?

I would not be understood as maintaining that a sudden deprivation of bile to the economy, is capable of destroying life in a few hours or even days, as the experiments of Bernard, Schwann and others prove conclusively that, when the bile is conducted directly out of the body of dogs by means of tubes inserted through fistulous openings in their abdominal parietes, in such a way as to receive the cut end of the ductus communis choledochus, that said dogs lived for several months and died at last of inanition from malnutrition, rather than from any toxic agency. But the artificial transportation of bile out of the body *after it has been fully formed*, in such a way as simply to deprive the organism of its physiological effects, is one thing, and failure on the part of the liver to make bile, whereby the elements designed for its manufacture are retained in the circulating fluid, is quite another.

The liver makes its bile, in part at least, out of elements produced from the debris of effete tissues, and that, too, at the expense of additional excrementitious matter; and to suppose that these could be retained in the circulation without great detriment to the system, would be to accuse the great Author of our being of a work of supererrogation. The supposition that these elements, when not made into bile, eventually become converted into poisons (just as in retention of urine, urea becomes converted into carb. amonia), is, I think, a very rational one. Moreover, the liver depurates the economy from many extraneous poisons by either retaining them in its own substance (as in the case of copper, arsenic, &c.) or eliminates them from the blood.

But, to return to the more pertinent question of hemorrhagic and bloody urine, how, it may be asked, can these be produced by suppression of bile? I have to reply:—

1st,—That effete blood-corpuscles, not being removed from the circulation by the secretion of bile, as in health, become eliminated by a viçarious action on the part of the kidneys.

2d,—The kidneys, in their heroic attempt to perform, as far as possible, the offices of the liver, assume a state of congestion to some extent, and thus favor hemorrhage.

3d,—Whether the blood in health, *after* its passage through the liver, contains more or less fibrin than *before*, is still, I believe, an unsettled point; but all agree in saying that it is (after its passage through the organ) much more firmly and rapidly coagulable, and hence a suppression of bile must contribute to a hemorrhagic condition.

4th,—When it is recollected that the portal vessels, unlike any others in the whole sanguifferous system, both *originate* and *terminate* in capillary tubes, it will be seen at a glance that inaction on the part of the extreme branches of the vena portæ must greatly retard the reflux of blood from the abdominal viscera, and thus contribute to a hemorrhagic diathesis.

5th,—Inasmuch as bile acids are known to possess the property of dissolving blood-corpuscles, it would not be very unreasonable to suppose that the elements out of which they (bile acids) are formed, become, when retained in the circulation, endowed, to some extent with the same solvent principle, and, in this way, dispose to hemorrhage.

6th,—It is a well known fact that suppression of bile from cirrhosis, fatty and amyloid degeneration of the liver, &c., &c., invariably produces jaundice with albuminous urine and a tendency to hemorrhage from mucous membranes generally; it need not surprise no one then that in black jaundice it should produce the same results. But I am trespassing on your patience, and will, therefore, pass on to the more practical portion of this paper.

Treatment.—Holding as I do the views above set forth, it will not be thought strange that I am an advocate for the use of mercury in this most intractable disease. As a general thing, I have been, and still am, much opposed to any active use of this medicine in most diseases attended with albuminous urine, but, believing that the only possible way to bring about a return to health was to re-establish the secretion of bile, I have not scrupled to use it promptly, in such doses and at such intervals, as seemed necessary to establish ptyalism in the shortest possible time, compatable with safety from inordinate mercurialism. And, let what will be doubtful, I think I have ascertained one fact at least with great certainty, viz.:—that those cases which are promptly salivated *invariable* get well; the only misfortune apparently being that, in some of the worst cases, it is impossible to produce the mercurial influence. Now, whether this insusceptibility to mercurialism is because the disease has so successfully stormed the whole citadel of life at its first onslaught, that no medicine is capable of producing its legitimate effects, or is simply evidence that the exhibition of mercury, in any and all cases, is inappropriate, are questions which the reader must determine for himself. As for myself, although strongly inclined to the belief that a free use of this medicine is proper in every case, yet I will not go so far as to say that, because ptyalism is *invariably* followed by recovery, it follows, as an *inevitable consequence*, that mercury is *the* remedy in this disease. It is possible that those cases which are susceptible of salivation would get well without it. It is alleged, and, I believe, with truth, too, that all cases of yellow fever which can be and are salivated, in their incipient stages, invariably get well. Yet, now-a-days, there are few, if any, advocates for the constitutional use of mercury in this disease. But it must not be forgotten that the disease under consideration is pronounced on all hands to be one of malarial origin, and from the known efficacy of calomel in all other diseases dependant on the same cause, it would be reasonable to suppose that it would be beneficial in this also. If then you publish this, and any of your readers should be inclined to try the mercurial treatment, they can observe for themselves whether salivation and recovery, in the recovered cases, bear the same relation to each other as cause and effect, or simply that of fortuitious concomitants. All that I vouch for, I repeat, is the fact that recovery will invariably follow salivation; but, post hoc, ergo propter hoc, is a will-with-the-wisp, which has frequently deluded others, and I can boast no immunity from its bewildering glare, notwithstanding the *facility* with which I can extend to it an *empty* inverted pocket—I say facility, because, forsooth, said cul-de-sac is not much accustomed to being overburdened with valuables, so as to make the preparatory step of removal necessary. But pardon this digression, I will not offend again.

Although there is neither intermission nor remission in the fever I have been in the habit of using quinine, both as an adjuvant to the mercury in producing ptyalism, and likewise because of its known paramount efficacy in all malarial diseases; my habit is to administer it in about such doses as are proper in remittent fever. In addition to these means I think I have seen benefit derived from mild sudorifics and diuretics.

As to blisters, I can only say that, having never seen any particular indication for their use, I have not tried them; but physicians who have, state that they did not seem in any way to aggravate the hæmaturia.

I once treated a case complicated with worms, of the variety oxaris lumbricoides, in which I very guardedly ventured on the use of oil of turpentine with apparently but little if any other effect than to aid the calomel in expelling the worms. I was rather inclined to the belief that it diminished the hæmaturia, but my use of it was so guarded that it is rather probable that it had but little effect on it one way or another. The calomel conjoined with it was sufficient to clear up the urine of itself.

It has always seemed to me that nitro muriatic acid, from its chologogue styptic properties, would exert a good influence on the disease; but never having tried it I am unable to say.

Feeling that I have already protracted this crude sketch to an unwaranted extent, I will close it without further remark, save that if it should serve to call forth an expression of opinion from a source worth of the subject, that such a result will amply repay the little care devoted to its preparation.

Progressive Locomotor Ataxia—Myelo-Phthisis.

WITH REPORT OF THREE CASES TREATED BY THE EDITOR.

This is a disease of the nervous system that has attracted a good deal of attention in the last six years. I never even heard the name till since the close of the war, but the journals have had reports of cases since 1860, which we were not able to procure until lately. To say it is a new disease would lead to error; but it has been defined and separated from other diseases of the nervous system. It has attracted our attention from the fact that, during the last year, we had two well marked cases, a succient account of which we propose to give in this article, and then follow it with an able review from the *American Journal of the Medical Sciences.*

On the twenty-fourth of July, 1866, I was called to Col. A. M. Hobby, of this city, who had been confined to his mother's residence, some six miles down the island, where she then lived. I found him in the following condition and with the following symptoms, which he has been kind enough to furnish me, at my request, in the following letter within a few days since :—

"I was suddenly taken with a chilly sensation in the morning, which was followed by swimming in the head, which prevented me from walking. I dined as usual, but retired feeling unwell. Next morning the dizziness of the day before was greatly aggravated with intens enausea, vomiting violently at intervals, until the stomach was entirely evacuated. For three days I remained in this condition without appetite; the nausea subsided, but the brain seemed still to whirl with unabted velocity. Fourteen months have elapsed since the first sensation, and it still remains in a modified form. I can remember no day or hour that I have been free from it. I am unable to assign any cause for the attack. During the winter and spring I had worked very hard at my office throughout the entire day and generally until twelve at night. The effect was depressing to my spirits and enfeebled my general health. I took a shower-bath three or four times a week—an experiment which I had never tried before. The dizziness to which I have alluded I cannot accurately describe. With my head at rest I felt no sensation at all; but, when sitting erect or walking the upper brain seemed to vibrate (seemingly as a bowl of jelly when moved), objects that I approached in walking or riding seemed to tremble and become unfixed, and I have not been able to look upwards or suddenly turn my head. The pain was rarely acute, but generally dull, as though a weight were on the brain, and the pressure downwards. The internal remedies were numberless, and I do not think had the slightest effect. Blistering seemed the preferred external remedy. My head, neck, temples and forehead were blistered sixteen times, the blisters remaining on for thirty-six hours, and tartar emetic applied when the blisters did vesicate. If from any remedies used I received benefit, the last deserves the credit. But travel and exercise restored me to my present condition chiefly. I am unable to say how far I have been restored; my impression is that I have simply become more accustomed to the dizziness. During the entire attack, except the first few days, I was not confined to the house, my sleep was unbroken, and my appetite good."

The Colonel has well described his symptoms, and, before commenting upon his case, we will give the symptoms of Mr. Thomas Carroll, who was a patient in the hospital at the same time—October 26, and discharged December 21.

Both gentlemen are about thirty years of age, of a highly nervous temperament. Col. Hobby—poetical, as all the country knows. The other gentleman came to the hospital partially paralysed, from the schooner Gen. Knox, a native of Ireland, and walked in a choritic gait—an irregular spasmodic walk;—could only speak in a whisper; was slightly pale but otherwise looked well, and weighed about 140 lbs. This patient suffered no pain, but was at times perfectly paralysed from his hips down, and again could walk well. These changes occurred several times during his stay in the hospital. He did not complain of any swimming in the head or dizziness, but complained of slight headache and pain in his back and numbness in his legs. At times he was so bad that he passed his stools involuntary, and had for weeks to be helped to his stool-chest. His appetite was always good and digestion good unless offended by medicine. His spine was frequently examined by me, but I could not detect any soreness or observe loss of substance in the spinal column. I know nothing of his previous history or that of his family.

These two cases are well-marked types of the same disease. Col. Hobby's lesion I believed was in the cranium, and Mr. Carroll's in the corda spinalis, and the corda oblongata. In Col. Hobby's case, the voice was never affected or changed in the least. In both, the mind, so far as I could judge, was clear and good, and reasoning faculties perfect. Mr. Carroll had to talk in a hoarse whisper, but always answered my questions correctly and directly without hesitation. Col. Hobby's sight was slightly affected at times.

Mr. Simpson, of Capt. Katchen's company, in 1864, was taken with a hoarseness and affected in the same way as the last case, so far as his voice was concerned, but he never complained of any difference from his former health.

The third case was also hoarse, but never confined to his bed, or had any simptom either of paralysis of the general muscles, but his speech was as bad as Mr. Carroll's, or even worse, as I could scarcely understand him at times. He was about thirty-five years of age, stout and strong; was a soldier, and took it in camp. I sent him home on furlough, but he returned not improved and continued in the loss of his voice until after the war closed; and when in his county—Gonzales—last fall, I inquired after him and learned he had entirely recovered his voice. This was an honest and good man, and for most of the time stood guard at his regular time without complaint. These three cases are all that I have ever seen, and all have recovered, or now enjoy business health.

Col. A. M. Hobby had what was usually called by the old writers "Paralysis Agitans." The other two cases were cases of aphonia, and Mr. C. had also paralysis of the inferior extremities. His hands were not complained of and had good motion; his sight was perfect and no change in the pupils of his eyes were ever observed, nor in the third case. There is another form in which the voice and the power of deglutition is affected called aphasia—difficulty of swallowing, with loss of voice and partial paralysis. Therefore, to sum up the symptoms to form a case of *progressive locomotor ataxia or Myelo-Phthisis, I would say there is irregular motion, loss of the power of coordination, in the voluntary muscles without injury to the power of reason or reflection, but impotency in motion or want of regular motion, sometimes attended with perfect paralysis of some of the voluntary muscles,* and in extreme cases the involuntary, as was the case with Mr. Carroll.

CAUSE.

The cause of the disease in Col. Hobby's case was, no doubt, mental labor, and want of exercise in the open air. In the second case, it was sleeping in a strong draft without a sufficiency of clothing. In the third case, it was standing guard in bad weather and changing the use of a Mexican comforter.

PATHOLOGICAL LESIONS.

Of these, in these three cases, I could only speak from conjecture, as they all recovered, and shall only attempt to give my own opinion, but leave the reader to judge, as I have done, from the review following. That there was a lesion of the nervous tissue in every case, and the result of subacute inflammation I am fully assured. What was that lesion and where situated is what we wish to ascertain.

TREATMENT.

Col. Hobby had taken several prescriptions from other physicians before I saw him, consisting of mercurials, quinine, iron and anodynes. I found him setting up in a rocking or arm-chair, reading; was paler than I ever had seen him, but did not seem to be much reduced. His pulse was natural, pupils a little contracted, and, when he walked, he moved like he was afraid he would fall, either holding to something or having his hands out to catch himself, with his eyes fixed to a certain point. Complained of some heaviness but of no real pain.

I ordered his head to be shaved and blistered and kept running as long as possible, by mercurial ointment and lard mixed. I desired him to take no medicine internally except the iodide of potash and syrup of sarsaparilla. To eat what he liked and to keep quiet and out of the sun, and take only exercise on his gallery; to quit reading or writing and not sit up too long. This course was pursued for several weeks with a slight improvement. He invariable improved just after the blisters had drawn, but as they dried up was not much better. Dr. Heard was called with me, and we changed the iodide of potash to bromide and the valerianate of zinc. This he did not relish and it disagreed with his stomach. We also gave him every night, or every other night, iodide of mercury and ext. belladonna and sarsaparilla, but continued blisters to head. This was continued for one month without a decided change either for better or worse. I continued the case with nitrate of silver and hyoscyamus, with blisters and occasional doses of brandy and wine. Directing him to live on eggs, birds, and everything he liked; he improved under this treatment.

But at the suggestions of Dr. Petty, of Richmond, Texas, I inserted a large seton in his neck, which he wore for two weeks, but did not experience any relief, and, finally, took it out. The mercurial ointment was applied during the whole time to the blisters to the head, and it never salivated him or made his mouth sore. There were many things tried for a few days and abandoned, and if he received any benefit at all, and, I believe, it saved his life, it was from the blisters and the nitrate of silver and hyosyomus. When the cold weather set in and he could venture to the country he went to the interior and was gone for several weeks; since his return he has attended his office regularly, doing the business of a commission merchant. His mind is clear and as strong as ever, and never was at any time materially affected. He could write, read, or speak as well as he ever did. He has tried the medicated baths this winter, and is now taking pills of nitrate of silver at my suggestion, ⅛ gr. at a dose. He looks well, and brought to my office this evening the before-given statement, which expresses what he thinks of himself.

No. 2 was treated on the same principles:—blisters to spine and back of the neck, repeated with nitrate of silver and sarsaparilla, turpentine and chloroform liniments, mercury on blistered surfaces. He had what he could eat and as much as he would eat. He recovered and became an assistant cook in the hospital, and finally left as fat and active as any one, with a clear, sharp voice. Strychnine was given him for his paralysis at various times; but whether it ever done any good or not I am unable to say.

Case third was blistered under the chin; mercurial ointment and various liniments used, but received more good from inhalation of equal parts of tincture of iodine and chloroform, which improved his voice, and, at times, he could speak lounder than at others. I have thus faithfully given, in general terms, all the important points in these three singular cases, and they at least are encouraging, and, if I had other similar cases, I should recommend the same course. I did not expect case the second to recover, and was for months very uneasy about Col. Hobby. At the time I treated No. 3, I knew nothing of what has been since published in the South, and had not seen the disease described, and classed it with paralysis of the vocal cords, without any theory as to its cause or the peculiar lesion, whether seated in muscular or nervous; but now I believe that the primary lesion is in the nervous system, and that the paralysis is the effects, or rather the symptoms, of other lesions, and hence, in case the third, it was in the corda oblongata, affecting the course or origin of the gloso-pharingial and pneumo-gastric nerve— that is, the eight or ninth, as given in Dunglison's Dictionary. The lumbar nerves were affected in addition to these in case No. 2, and the commissures of the brain in No. 1.

I deem this subject incomplete without the following review, which I here insert:—

PROGRESSIVE LOCOMOTOR ATAXIA.

ART. XVII.—*De l'Ataxie Locomotrice Progressive.* Par le Dr. DUCHENNE (de Boulogne.) (*Arch. Gen. de Medicine*, December, 1858; Jan., Fev., and Avril, 1859.)
On Progressive Locomotor Ataxia. By Dr. DUCHENNE, of Boulogne.

2. *Etudes Cliniques et Histologiques sur l'Ataxie Locomotrice Progressive.* Par HIP. BOURDON, &c. (*Ibid.*, Nov., 1861; Avril, 1862.
Clinical and Historical Researches on Progressive Locomotor Ataxia. By Dr. BOURDON.

3. *Erfolge der Behandlung der Progressiven Spinal Paralyse durch Silbersalpeter.* Von C. A. WUNDERLICH. (*Archiv der Heilkunde*, Apr., 1861.)
Results of the Treatment of Progressive Spinal Paralysis by Nitrate of Silver. By PROF. WUNDERLICH.

4. *Weitere Erfahrungen, &c.* (*Ib.*, Dec., 1862.)
Further Results of Experience in the Treatment, &c. By the same.

5. *Uber Degenerative Atrophie der spinalen Hinterstrange.* Von Prof. Dr. N. FRIEDREICH, in Heidelberg. (*Virchow's Archiv*, xxvi., 391, 483, and xvii., 1.)
On Degenerative Athropy of the Posterior Columns of the Spinal Cord. By Prof. FRIEDREICH.

6. *De l'Ataxie Locomotrice.* Par GEORGE DUJARDIN-BEAUMETZ. (Paris, 1862, 8vo., pp. 73.)
On Locomotor Ataxia. By Dr. DUJARDIN-BEAUMETZ.

The intimate relations of physiology and pathology as the scientific groundwork of practical medicine have nowhere been more beautifully illustrated than in the advancement which has been made, of late years, in our knowledge of diseases of the nervous centres, and especially of the spinal cord. In spite of the discoveries of Sir Charles Bell, the interpretation of the phenomena presented by the diseases of this organ, was neither clear in itself nor fruitful of practical results in diagnosis and therapeutics. The treatises on practical medicine did not successfully attempt to establish sharply defined symptomatic species, nor even endeavor to found a classification of those which they admitted upon determinate anatomical lesions. In describing the latter, pathologists seemed to ignore the multiple functions which had been proven by experiment to belong to the spinal marrow, and the lesions of this organ were recorded with little attention to the independent offices of its several parts. This is the more singular when it is considered that numerous cases, long ago placed on record, which, as will be shown in the sequel, abundantly demonstrated the co-existence of at least one special disease of the spinal marrow and the peculiar alteration of this organ which constitutes its anatomical character. To experiments on living animals, against which an unreasoning susceptibility every now and then pricks the knight-errants of humanity to run a muck, the world owes this most important advancement of medical knowledge. Fortunately for society, as well as for the progress of the healing art, the chief pioneer in these researches has been guided and restrained within just limits by his acquaintance with disease and his office as a physician. At every step in his experiments, Dr. Brown Sequard has paused to compare the phenomena created by experiment with those evoked by disease, and reading the one in the light of the other, has reached results which, whatever may be the ultimate formula in which they shall be expressed, are sure even now to embody more and more exact truth than any arrived at by a single pathway of discovery.

To take a review of the several forms of paralysis in which the various functions of the spinal cord are deranged, impaired, or lost, would require a volume instead of the few pages to which we are at present restricted. But it may be remarked, in general, that while very much remains to be done, a great deal more has already been accomplished than is commonly recognized in systematic treatises towards determining the multiple causation of paralysis, and in proving that in very many cases the spinal axis reflects the operation of influences derived from remote organs, while itself remains essentially sound. This has been amply demonstrated by the eminent teacher we have named, in a course of lectures delivered in 1859,* and by E Gubler, in a series of articles published in 1860–61.† All of the other forms of paralysis have been within quite a recent epoch more narrowly examined than ever before, including that of the insane, of drunkards, paralysis from various poisons, from muscular atrophy, &c., as well as those resulting from acute diseases of the spinal cord and its membranes. Leaving these out of consideration, we propose to confine our attention to a review of the present state of knowledge regarding *locomotor ataxia*, as it has been called in reference to its peculiar symptoms, or *tabes dorsalis*, as it has been more significantly termed in view of its anatomical character. A somewhat more expressive title borne by the same affection is *myelo-phthisis.*

This disease has been defined by Duchenne as "a progressive loss of the co-ordination of muscular movements, and apparent paralysis, although the muscular power remains unimpaired;"‡ and this definition is accepted as his own by Trousseau.§ It would have been in accordance with the results of observation to add that the disease first manifests itself in the lower extremities. This is strikingly shown in the interesting group of cases observed by Dr. N. Friedreich, and in those collected by him in the historical notice which he has furnished of the observations of other physicians.‖ The earliest symptom of the affection consists of a sense of weakness and weariness in both legs together, or at first in one alone. It would appear, from a case related by Lecoq,¶ that the characteristic peculiarity of movement may, for a long time, or even permanently, be confined to a single leg. His patient could readily walk backwards, or go up and down stairs, but in ordinary

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*London Lancet, April to Sept., 1860.
†Archieves Generales, 1860–61.
‡Arch. Gen., Dec., 1858. 641.
§Abeille Med., Avr., 1861, p. 126.
‖Virchow's Archiv, vols. xxvi. and xxvii.
¶Arch. Gen., Jan., 1861, p. 698.

progression the left leg was quite uncertain in its movements. After a long time, in all cases, it may sometimes be after several years, and when the patient is no longer able to maintain an erect position a similar defect of co-ordinating power may involve the upper limbs. In one of Friedreich's cases the leg and arm of the same side were simultaneously attacked, while a sense of weakness and weariness affected the back and loins. In general, when one leg only is at first involved, the arm of the same side becomes involved before the leg of the opposite side. In the early stages of the disease the gait is only unsteady like that of a person slightly intoxicated; in going up stairs the patient has a peculiar swinging movement, and even in the standing posture there is a peculiar vacillating or balancing motion of the body. Bourdon attempts to draw a distinction between the gait characteristic of the early stages of this disease and that which is exhibited in some cases of disease of the cerebellum, by comparing the latter to the tottering and reeling movements of a drunken man, while of the former he says the patients walk with difficulty, because the will no longer directs their movements.* This distinction does not appear to be a real one. In both cases the will is ineffectual to regulate the muscular movements concerned in walking. A characteristic difference between the gait of true paraplegia and that of locomotor ataxia consists in this, that in the former the limb is thrown forward by an energetic movement of the trunk, when it ocillates for a moment and then falls heavily to the ground; in the latter, on the other hand, the co-ordinated movements of the lower extremities are suddenly interrupted, or are so irregular as to seem to be no longer under the control of the will.† It is, moreover, to be remarked that after years' duration of the disease, and even when the patient has long been confined to bed, or is quite unable to stand erect, he is still able to perform any simple movement of the limbs, as flexion, extension, &c., and that with considerable force. M. Trousseau relates *apropos* of this symptom, that one of his medical friends begged him to visit a patient who, he said, was affected with a very odd kind of paraplegia. It was an old man of fourscore, who appeared to be in the best of health, except that for a year preceding he had suffered from paralysis of the bladder and was unable to move from his chair. One day, the physician desiring to estimate the loss of muscular power in his patient's leg, requested the latter to extend the limb as strongly as possible. The experimenter, not expecting any exhibition of muscular power in the leg which he was holding flexed, was much astonished at finding himself thrown violently to the opposite side of the room. M. Trousseau himself was unable to flex or extend the limbs against the patient's will, and the invalid was able, without bending, to carry M. T. on his shoulders. It was evident, said M. T., that the case was one of muscular ataxia, and not of paralysis. It must not be supposed, however, that the muscular force is so perfectly preserved in every case. It is sometimes materially impaired, but never so completely lost as in true spinal or cerebral paralysis.

The real character of the disease is exhibited when the patient endeavors to execute any combined movement. When the upper extremities are affected, if he attempts to grasp anything, many abortive efforts are made for this purpose. A glass or spoon is not steadily directed to the mouth; and threading a needle or buttoning the clothes becomes a very difficult task. By these symptoms one cannot fail to be reminded of cholera. Indeed, the analogy

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*Arch. Gen., Avr., 1862, p. 387.
†Dujardin-Beaumetz, De l'Ataxia Locomotrice, Paris, 1862.

of the motor disturbances in the two affections deserves a closer investigation. In chorea, spasm is superadded to motor ataxia.

Muscular spasm is rarely noticed in this affection, a circumstance which distinguishes it strikingly from most other diseases, whether acute or chronic, of the spinal marrow. Sooner or later, according to Friedreich, the power of vocal articulation becomes impaired, but in general only after the upper extremities have for some time been affected. It gradually grows indistinct and stammering, so that the patient is with difficulty understood. In one case only noted by this author was there complete paralysis of the tongue, and that only for short periods; but in all, with this single exception, the patient could move the tongue in any desired direction. When the organ was thrust out it could not be kept still, but was affected with twitching and trembling. In one case a peculiar inco-ordination of the laryngeal muscles seemed to have occasioned a spasmodic cough with whistling inspiration and dysynœa.* Double vision, strabismus, falling of the upper eyelid. amaurosis, ond a peculiar oscillatory motion of the eyeball, have been occasionally observed. The muscles of mastication and deglutition appear never to be affected, and those which control the rectum and the bladder are rarely impaired..

Some discordance is to be observed between the accounts given by different reporters concerning the sensibility of the skin. Friedreich, whose observations bear the stamp of accuracy, declares positively that in all of his cases cutaneous sensibility was perfect, or but very slightly diminished. The lightest pressure upon the surface of the body, as well as strong impressions, such as punctures with a needle, were in all cases perfectly perceived, and the place where they were made correctly indicated by the patients even when their eyes were closed. A similar result followed the use of the test by a pair of compasses open to a greater or less degree. On the other hand, Dujardin-Beaumetz maintains that the sense of pain is sometimes lost, although he admits that it is less frequently so than the sense of touch, and that it may even be morbidly increased.

This derangement of sensibility is to be distinguished from that of the muscular sense, which is pretty generally admitted to be materially impaired in the greater number of cases; indeed this symptom constitutes one of the most striking phenomena in certain cases of the disease under consideration, It consists of an erroneous judgment of the degree of resistance opposed to muscular efforts. The patient, especially if unaided by his sight, no longer correctly appreciates the force or the purpose of his movements. They either exceed or fall short of their just degree, or are imperfectly harmonized, so that a sort of tremulousness or vacillation characterizes even the most simple movements, which, indeed, are often executed after a series of oscillatory efforts. But, according to Bourdon, as soon as the eye estimates the extent of the required movements, the muscles are competent to execute them.† This writer, however, maintains that the disordered movements just described are due to what he designates as "the loss of the sense of muscular activity," while in locomotor ataxia, properly so called, the disorder of muscular movements continues, in great part, at least, even when the sight intervenes to control them. In every attempt at walking, he says, the limbs are thrown forcibly in all directions, and often progression and even standing are impossible. The mere circumstance that the co-operation of vision is some-

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*Dujardin-Beaumetz, op. cit.
†Arch. Gen., Apr. 1862, p. 388.

times necessary to render muscular movements efficient, does not appear to be a sufficient ground for regarding the cases in which this circumstance obtains as belonging to a separate disease, any more than the degree of muscular ataxia itself. It is true that muscular ataxia does not necessarily imply imperfection of the muscular sense; but the latter has very seldom, if ever, been observed without the former. Future anatomical investigations may perhaps show that the two functional disorders in question are each dependent upon special lesions. Meanwhile it is certain that the records of cases do not always clearly distinguish between the two, or even recognize the existence of the separate functions which present them. *The one (ataxia), it should be recollected, relates to the performance of combined movements, as standing, directing the foot or the hand to a given point, &c.; the other (loss of muscular sense) relates to the sensations by which the mind judges of the position of the limb, the nature and degree of obstacles opposed to its movements, &c.*

Among the subordinate symptoms remaining to be noticed may be mentioned a sense of giddiness which has sometimes been observed in the early and sometimes in the advanced stages of the disease, and which occurred not only in the erect but sometimes in the horizontal posture also. Freidreich did not observe any disorder of the mind or of the special senses. On the other hand, Duchenne affirms that some disorder of vision was met with in seventeen out of twenty cases; and Trousseau speaks of the frequent occurence of strabismus and double or feeble vision in the early periods of the disease. There appears to be little or no diminution of muscular contractility under electro-magnetic stimulus at any stage; but in cases of many years' duration the electro-muscular sensibility has been found greatly diminished. For example, although the current excited powerful contractions in the legs they caused a relatively slight sensation, and the same current passed through the arms induced severe pain as well as muscular action. The sexual organs in the female are said to undergo very slight impairment of function, the catamenia remaining regular, and the power of conception continuing. In the male, on the contrary, if there appear to be insufficient grounds for the belief formerly current that tabes dorsalis is one of the direct consequences of excessive venery, it is at least certain that when the disease is established the virile powers rapidly decline and ultimately become extinct. The functions of the digestive and urinary organs present no special symptoms.

The anatomical characters of *myelo-phthisis*—the lesion which produces chronic and progressive locomotor ataxia—may be considered as established. Duchenne, after describing the symptoms of various cases of the disease, avowed his ignorance of the anatomical conditions producing it; he even states that in a case of it which proved fatal by intercurrent disease, no lesion of the brain or spinal cord was discoverable. Such a statement cannot now be accepted unless it is supported by the results of a microscopical examination made by an expert. On the other hand, M. Bourdon correctly presents the following as the result of post-mortem examination in thirteen cases observed by himself and various other physicians:—

> "The posterior columns of the spinal cord and sometimes the cineritious substances, had undergone degeneration, were of a grayish-yellow color and semi-transparent; the posterior roots of the spinal nerves were also atrophied; sometimes the optic nerve, and in one case the tubercula quadrigemina had become altered."

Every new contribution to the subject proves this description to be essentially correct, and the whole goes to confirm the proposition announced in

1858 by Dr. Brown-Sequard, and contained in the volume of his lectures published in 1860:—

"That in cases of alterations limited to the posterior columns, but occupying all their length and thickness, or only the whole of the lumbar swelling, there is an impossibility of standing or walking, depending upon the loss of the reflex action of the limbs; but that in bed, the patients in such cases can move their lower limbs pretty freely."

The reader will, however, better appreciate the nature of the anatomical lesion in question after examining the following summary of the report published by Friedreich relative to three cases which died of an intercurrent disease (typhoid fever) while under his care. In all of them the ataxia had been of many years' duration.

The external surface of the spinal dura mater showed no visible alteration; but in all three cases the finger could detect some fluctuation in the lumbar region, and, on opening the membranes in this part, a considerable portion of clear transparent liquid escaped, while above and below the dura mater lay in immediate contact with the pia mater. The latter had a milky and turbid aspect the entire length of the posterior columns, was of unusual firmness, with difficulty separable from the substance of the cord, and upon its external face was adherent to the inner surface of the dura mater by numerous white bands and threads. The ligamentum denticulatum in its whole length was thickened and of a milky whiteness. The alteration of the pia mater extended somewhat, but in a less degree, over the lateral columns. These lesions sufficiently demonstrate the existence of a chronic spinal meningitis.

The most striking and essential changes were in the substance of the spinal marrow. Even a superfical inspection revealed, in all the cases, a gutter-like depression, of greater or less depth, along the posterior surface of the cord. It was deepest in the lumbar and dorsal regions. On making transverse sections of the cord it was evident that this depression corresponded to the atrophied posterior columns which, even to the naked eye, had a grayish and translucent aspect in striking contrast with the normal appearance of the lateral columns. In two of the cases this altered portion was firmer and tougher than the normal tissue; in the third its consistence was but slightly abnormal. In all three cases the whole of the lumbar portion of the cord, with the exception already stated, was less firm than natural, which, probably, may be attributed to its post-mortem maceration in the effused serum.

These lesions agree with the symptoms in pointing out the lumbar portion of the spinal marrow as the part first agected, and as showing that the disease proceeds thence to the upper portions of the cord.

In two cases the anatomical alteration had slightly invaded the lateral columns in the lumbar region.

In all the natural line of separation between the opposite halves of the organ had almost totally disappeared so far as the posterior columns were concerned; but the cineritious matter offered no evidence of change when examined with the naked eye, or with the microscope. The pons, the crus, and the cerebellum were free from disease.

The microscope showed the same degeneration wherever the grayish aspect of the tissue existed. In place of nerve fibres were seen delicate empty tubes, imbedded in a granular substance, consisting of cells containing several nuclei; and in proportion to the amount of this substance was the loss of the normal nervous fibres. In these no trace whatever of fatty degeneration could be detected. In the lumbar region the destructive process was so complete that only after searching a long time could any rudiment of a nerve fibre, with a double contour, be perceived. Corpora amylacea were met with in the midst of the elements already mentioned. The microscope revealed no change of structure in the anterior or in the lateral columns, except at some points of their connection with the posterior columns.

The posterior roots of the spinal nerves were atrophied, being thinner, flatter, and harder than natural, but the anterior were unchanged. The atrophy of the posterior roots was most conspicuous in the lumbar region. Their proper nervous constituents, in a great measure, had disappeared, yet the continuity of all the fibres was not entirely destroyed. The sciatic nerves were also in some degree deficient in nervous matter.

Hence, anatomically, the disease is "*a chronic inflammatory process resulting in the atrophy of the nerve elements, and which, being confined to the posterior column of the spinal cord, begins in its lumbar region and gradually extends thence both upwards and downwards. With this alteration is associated a spinal meningitis affecting the posterior face of the cord, and proportioned in its degree to that of the alteration of the cord itself.*"

It may be interesting to know that in a recent case of the disease, which proved fatal with phthisis, under the care of M. Trousseau, the same lesions were found by the skilful anatomist, M. Sappey. The lumbar portion of the cord was slightly diminished in volume and of a grayish tint within. The posterior roots of the nerves were considerably atrophied; they had lost from two-thirds to three-fourths of their normal volume, were flattened, and no longer white, but reddish-gray. Some of the nerve tubes of these roots retained their integrity; of the rest, the greater number had lost a portion of their medullary contents, and, in some points, were contracted, and a little further on relatively enlarged, In very many the medulla had completely disappeared at different points, and some of the nerve tubes were quite empty.* It will be observed that the lesions in this affection present as uniform a character as those which are acknowledged to be the anatomical character of any disease whatever. They are almost always confined to the lumbar portion of the cord and its dependent nervous roots, or present sufficient evidences in their nature and degree to prove that they began in that region. Instead of extending into the substance of this complex organ, as it does when traumatic in its origin, the softening extends along the parts just indicated, thereby proving their essential organic and functional independence as distinctly as when effects, analogous to the phenomena of the disease, are produced by the scalpel of the physiological experimenter.

The causes of tabes dorsalis are very obscure. There would appear to be some ground for the belief that hereditary tendency may have a share in its production. According to M. Trousseau, although it cannot be shown that this special disease is transmitted from one generation to another, there is proof, at least, that it is apt to occur in families which manifest a proclivity to nervous affections. A stronger proof is furnished by the cases of Dr. Friedreich, all six of which took place in members of two families. Sex does not appear to exert a decided influence in its causation. Some observers have met with more cases among males and others among females. It may be remarked that when the affection was more generally than now ascribed to sexual excesses, the male sex was alleged to furnish the most numerous examples of it. But a comparison of recorded cases does not substantiate this view of its causation, and consequently the inference cannot be admitted. Friedreich lays much stress upon the fact that in all of his cases the first symptoms of the disease manifested themselves about the epoch of the maturity of the sexual development, *i. e.*, between the fifteenth and eighteenth year. Canstatt gives the age between the eighteenth and thirtieth year as that in which it most frequently commences; and Dujardin-Beaumetz states that "it almost always begins between the thirty-fifth and fortieth year." These discordant conclusions prove that no general law governs the matter. The same remark is applicable to the duration of the disease. It is quite indeterminate, but usually very long. Of Friedreich's patients three died of typhoid fever in the twelfth, fifteenth and sixteenth years of the disease respectively; while in three who were still living the symptoms had lasted for nine, eighteen, and twenty year.

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*Arch. Gen., Avr., 1863, p. 490.

Dr. Brown-Sequard, if correctly reported, regards muscular ataxy as only a symptom incident to various lesions of the brain and spinal marrow.* The passage we have elsewhere quoted from his lectures would, on the contrary, favor the conclusion we have adopted that degeration of the posterior columns of the spinal cord is essentially connected with the peculiar disorder of the muscles now denominated ataxia. Wunderlich is not willing to accept the individuality of the disease and its anatomical expression in the lesions of the spinal cord, maintaining it to be questionable whether these lesions, instead of being the original cause of the symptoms are not in reality results of the long functional inactivity of the organ. But, it may well be asked, what, then, is the cause of the degeneration affecting the spinal marrow in cases where this is the sole abnormal point of the whole organism? Certainly, the palpable and visible lesion must be preceded by an invisible and inappreciable organic change, which, if anything has occasioned the peculiar and progressive loss of the equilibrating power in the lower limbs; and it is more logical to suppose this loss of power to depend upon a central change which, sooner or later, becomes atrophic degeneration, than to assume a causeless loss of function in an organ as the source of its decay. While leaving out of view for the present, then, the degrees of the lesion in question, we feel authorized by the whole clinical and post-mortem history of mscular ataxia, to regard it as an independent affection, whose phenomena with their analogies and differences it is important to learn.

Now it is very certain that derangement of the motor power of the lower extremities and of other parts cannot be the initial phenomenon of the disease in the great majority of cases; it is rather an evidence of its maturity. Several symptoms have been regarded as characteristic of its early stage. Duchenne has called particular attention to loss of sight and strabismus affecting one eye, and usually temporary in their duration. But others have witnessed nothing of the kind. Perhaps they were less minute in their examination; but this is not to be presumed, nor is it probable that such striking symptoms as those alluded to, would escape the notice even of less practised and minute observers than Friedreich, and Wunderlich, and Bourden, and the others who have reported cases of this disease. Nor is it in accordance with general observation that darting pains in the lower extremities precede their loss of co-ordinating power as Duchenne declares. This symptom is undoubtedly met with in a certain proportion of instances (we have, ourselves, observed it most distressingly developed in a well-marked case of the disease), but the records prove that it is oftener absent then present. There remains then, only the peculiarity of the disorder of mobility upon which a diagnosis of the affection can be based; and, as it is probable that this may have been of long duration before its increase has become sufficient to attract attention, the conditions attending the primary development may have remained undiscovered. Once, however, noticed, it is probably taken for a paraplegia, *i.e.*, for a loss of *motor power* in the lower limbs, and hence its distinction from true paraplegia should be as clearly as possibly ascertained.

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*Med Times and Gaz., March, 1868, p. 248 and p. 274.

It is unnecessary to repeat in this place what has been more than once stated, that the pathognomonic sign of tabes dorsalis is an imperfect power of co-ordination of the muscles of the lower limbs, and exceptionally of other parts.

Such is the typical expression of the disease. But it will readily be understood that the lesion of the posterior columns, with or without that of their corresponding nervous roots, and which gives rise to the symptom in question, may not be the sole alteration of the spinal cord. It may be complicated with lesions of the gray matter, and of the lateral, or of the anterior columns; and thus may be occasioned various degrees of hyperæthesia, anæsthesia, and true paralysis. Dr. Brown-Sequard has demonstrated these propositions experimentally and clinically.* Thus it is that his statement referred to in the last paragraph finds its justification. But it does not follow that there is not a disease originating anatomically in the posterior columns of the spinal cord, running its course chiefly in them, and occasionally the symptoms which we have endeavored to describe in this article. But we shall return to this subject when speaking of the treatment of the disease.

It will not be without interest or utility to consider the most striking differences between the symptoms of other spinal affections and those of tabes dorsalis. Hysterical paralysis is undoubtedly the disorder which most closely resembles it, presenting as it generally does a diminution of the muscular sense, while the power of muscular movement may be but slightly impaired. Nor, when the loss of power is constant in the same muscles, does it appear easy to ascertain the real nature of the case except by employing, as Duchenne advises, cutaneous and muscular faradisation, which, he asserts, will generally cure the one, but not the other affection. In general paralysis of the insane, there is a loss of power in all the muscles when the disease is fully developed, and during the earlier stage a general tremulousness, but the co-ordinating faculty is not impaired. M. Duchenne describes as general spinal paralysis the gradual failure and final loss of the power of the muscular movement, with the loss or diminution from the first of the susceptibility of the paralyzed muscles to the electric stimulus, and the ultimate fatty degeneration of these muscles. These examples may serve to indicate the most important points of differential diagnosis in the study of tabes dorsalis; yet it is, after all, sufficient to bear in mind the distinctive sign of the disease given above, the impairment of muscular co-ordination, and to exclude all grounds of historical paralysis, to render the diagnosis as nearly certain as possible.

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*Lectures, Philadelphia, 1860, p. 136.

There would be little advantage in discussing the value of the long list of remedies which have been used in the treatment of tabes dorsalis. Revulsives and derivatives, general and local baths, electricity, ergot and iron, nux vomica, and cod-liver oil have all been tried perseveringly, and the result has only served to confirm the melancholy conclusion of Romberg*:—

"There is no prospect of recovery for patients of this class; the fatal issue is unavoidable; the only consolation that can be offered to those fond of existence is the long continuance of the disease. If, in any case, the busy activity of the physician increases the sufferings of the patient, it is in tabes dorsalis."

Friedreich, also, concludes his short summary of this part of the subject by saying:—

"It is indeed discouraging to observe how, in spite of active remedies, the symptoms gradually but visibly grow worse, while an evident suspension of its rate of progress may be observed when all medicines are disgarded and the patient is confined entirely to dietetic measures."

Almost the only persons who have furnished a less discouraging estimate of the value of remedies in this disease are Dr. B. A. Wunderlich, Professor in the University of Leipsic, and those who in imitation of his example have employed nitrate of silver in its treatment. His first publication was made respecting it in 1861,† and in this he maintains that no diagnostician in the world is competent to declare beforehand what precise lesion will be found after death in any case of "progressive spinal paralysis," nor in what degree of disorganization, if any, the spinal marrow may be at a particular stage of the symptoms, nor what are the limits of nature's power in restoring the injured structure of the affected organ.

"My cases," he remarks, "appear to me most distinctly to prove that one may be affected for years with progressive spinal paralysis, and already have sunk into the most deplorable condition, without its necessarily following that the nervous matter essential to the impaired functions shall be destroyed. We ought, rather, as my cases show, not to abandon too readily the hope that the integrity of the function may be restored. (p. 197.)

MM. Charcot and Vulpian‡ assume a similar position:—

"*The gray matter of the cord,*" *they remark,* "*is usually intact in these cases; the nerve tubes of the posterior columns are alone altered, and their alteration usually consists in this that the medullary matter has disappeared, while its containing tubes are unimpaired.* IT IS EASY TO CONCEIVE *that such an alteration is susceptible of repair; that the nervous matter may be reproduced in the tubes, and that these being gradually restored to the normal condition, may regain their functions.*"

Undoubtedly, such a process may be imagined, but there is no proof whatever that it actually takes place.

However this may be, the real and important question relates to the curability of tabes dorsalis by nitrate of silver. We have examined with great care the cases published by the authors above named, and by M. Hershell,§

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*Syd. Soc. ed., ii. 400.
†Bull. de Therap., June, 1862, p. 486.
‡Ibid., p. 373.
§Archiv der Heilkunde, ii., 193.

M. Moreau,* M. Beau, and M. Vidal,† and we have not been able to accept their conclusions as demonstrated.

In nine cases the symptoms undoubtedly comprised the peculiar aberration of the co-ordinated movements which is characteristic of tabes dorsalis, and they were all, more or less, benefitted, some of them wonderfully improved, by the administration of nitrate of silver.

But there was a peculiarity in them all which appears to have been overlooked by their reporters, and which distinguishes them widely from those cases of the disease which Friedreich, Bourdon, and earlier writers described, and which, as we are convinced, requires them to be placed in a different category from the latter. *They were all of a rheumatic origin.* In the history of each we read:—"the patient lived in a cold and damp room," or, "he had the perspiration checked," &c., before the first spinal symptoms made their appearance.

The operation of such causes followed by locomotor ataxia would seem to point out a chronic spinal meningitis as the real disease in the cases referred to, rather than a progressive degeneration of the posterior columns of the spinal marrow. The one affection is not in its nature incurable, but there are no adequate reasons for believing that atrophied or softened medullary matter can ever be replaced by sound tissue. It is further to be observed, in relation to the efficacy of the proposed remedy, that it is claimed, even by M. Wunderlich, to have effected a cure in only one case out of five, while in the remainder more or less improvement was manifested. Yet these were all coparatively recent cases, and one, the most successful, was not of more than three months' duration when it came under treatment. MM. Charcot and Vulpian, after alluding to these circumstances, state that the duration of their cases was much longer, extending to several years, and that they had all been sent to the Salpetriere as incurable after having been treated by various methods in different hospitals. Surely, in such cases it is in the highest degree probable that the medullary lesion, if any, had already reached its full development. How, then, can we explain that the success in their treatment was relatively greater than in the more recent cases? We cannot refrain from doubting the reality of the pathological condition ascribed to them all, for we cannot but feel surprise that a medicine should be found efficacious in direct proportion to the gravity of the condition it is proposed to cure.

Among the cases reported by some of the gentlemen above referred to, are several whose relations to tabes dorsalis may be questioned upon other grounds than those suggested. In the second case of MM Charcot and Vulpian the previous history of the patient includes sciatic and hysteria, numbness of the hands and feet, violent pains in the ends of the fingers, intense and continued pain in the cervical and dorsal regions, &c. These are anomalous symptoms in the affection to which they are referred. In Herschell's case also, there were excessive pains and intolerable cramps in the feet, followed by complete amaurosis. The ataxia, too, is described "as a sort of tremulousness whenever the patient endeavored to grasp anything." These, too, are not characteristic. The same may be said of Duguet's case, which was complicated with epilepsy. One less open to criticism is that of Vidal, in which the exciting cause appeared to be prolonged sexual excesses, and

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*Bull. de Therap., Oct., 1862, p. 360.
†Ibid., Jan., 1863, p. 82.

the symptoms, generally, were characteristic; but, again, incontinence of the urine and feces is mentioned, and obtuseness of sensibility to the touch, although friction was painful, symptoms not observed when the disease has existed in connection with alterations of the posterior columns of the spinal marrow.

Without entering further into a critical analysis of these cases, which would, however, be both interesting and profitable, we shall conclude this portion of our subject by quoting a report of M. Trousseau's remarks in a clinical lecture:—

"He appeared to be apprehensive that the experimental use of nitrate of silver, which is now carried on so extensively, is the result of a partiality which clinical observation does not justify. Of four persons in his wards laboring under this disease, not a single one had been benefited by the treatment in question. He referred, however, to a private patient in whose case it had done wonderfully well, and who assured him that it had saved his life. But, although he had known it to cause improvement, he had not seen it effect a single cure."*

The ultimate conclusions of Wunderlich himself are far from affording a sure ground of faith in the proposed remedy, since he confesses that he is acquainted with cases which improved very considerably under the influence of mere rest and simple baths; a circumstance, by the way, which strengthens the conviction that his cases were not examples of tabes dorsalis at all. Finally, he confesses that he cannot answer for the permanence of the improvment which appeared to follow the use of nitrate of silver. So that the question of its curative action is still *sub judice*.

It would be to undervalue the results which we have thus briefly analyzed were we to deny the advantage or the propriety of using nitrate of silver in cases presenting the peculiar aberration of muscular motion we have been considering. So long as the practical difficulty of determining the precise nature of the symptom exists in any case, and so long as clear indications for other treatment are wanting, it is not only allowable, but required that a remedy, whose virtues are so highly and authoritatively set forth, should be tested to the full extent. In the case of a lady under our care, who lost the co-ordinating power of the lower limbs after a slight but depressing attack of pneumonia, but whose muscular vigor in the same parts remained wholly unimpaired, we made use of the nitrate of silver perseveringly after all other remedies had completely failed. It did not appear to improve the symptoms in the slightest degree, and was at last abandoned because it occasioned gastric oppression and heartburn.

It should be mentioned that the dose of nitrate of silver employed by all the physicians to whom we have referred, was essentially the same, viz.:— one-fifth of a grain given twice a day at first, and subsequently three times a day. This dose was seldom exceeded but it was, with short intermissions, continued for many successive weeks. Its good effects appear to have been visible within a few days after its use was commenced.

It will interest reflecting readers to learn by what steps a disease which must always have existed, came at last to be recognized as symptomatic of a definite lesion of the spinal cord. The interest will not be diminished by knowing that so eminent a practitioner and pathologist as Lebert has not described it either in his magnificent work on pathological anatomy, or in his treatise on the practice of medicine. This will seem the more remarkable when it is known that Cruveilhier's Pathological Anatomy, which Lebert's was intended to complete according to the later advances of the science, contains several instances, described at length, of the specific lesions and symptoms of tabes dorsalis. The very first case which he relates was of seventeen years's duration, and, although complicated in several respects, it presented the peculiarity that the patient could move her limbs freely, but not stand on them. Another case, of which a detailed account is given, bears this descriptive title:—"Complete loss of sensation and only partial of motion in the lower limbs. Yellowish-gray transformation of the posterior columns of the spinal cord." She was able to move her limbs freely in bed, but could not stand. The posterior columns in the dorsal lumbar regions were alone affected.*

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*Bull. de Therap., April, 1863, p. 315.

In Baly's translation of J. Muller's *Elements of Physiology*, Part III., published in 1837, we find the following passage at p. 807:—

"The cord is always charged, as it were, with motor power, and, although in transmitting the nervous fibres from the brain, it acts as a conductor of the oscillations originating in the sensorium commune, still the intensity of the action excited depends not merely on the strength of the will, but also on the amount of motor power accumulated in the cord. Hence this part of the central organs may retain its property of conducting the volition from the brain, but lose the second power by which it determines the strength of our movements; and this is what happens in tabes dorsalis, a disease caused only by debauchery, and attended with atrophy of the cord. *Here no muscle of the lower extremities is at first paralyzed; all obey the influence of the will, even in the advanced stages of the disease; the patient can execute every movement*, and it is evident that the spinal cord is still unimpaired as a conductor of the oscillation or current originating in the sensorium. But the force of the movements is lost; the patient can neither stand nor walk long at a time; and the power gradually diminishes until the paralysis is complete. This kind of paralysis must be carefully distinguished from others, in which the conducting property of the cord is injured at one point, and the muscles which receive their nerves from below that point are no longer subject to volition, while all other muscles retain their full power of motion."

In this extract the distinction is plainly drawn between a loss of what is now called the the co-ordinating function of the cord, and its function as a medium for the transmission of motor power.

It is unnecessary to quote at length the description by Romberg of the disease in question, as it is contained in the Sydenham Society's edition of his work on Diseases of the Nervous System. The symptoms which he attributes to tabes dorsalis are clearly derived from cases in some of which the lesion was composite; but in describing the post-mortem lesions in certain cases, he says:—

"It is a point of especial interest to observe that the posterior, sensory roots [as they were then exclusively considered] are occasionally alone affected in conjunction with the posterior columns of the spinal cord, the anterior motor columns and nerves retaining their normal structure."

Romberg lays peculiar stress upon the assistance which the patients derive from the sense of sight in regulating their movements; indeed, he denominates it a pathognomonic sign.

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*Anat. Pathol. (1837), livraison xxxii.

In 1840, Dr. Brach, of Cologne, wrote an article with the title:—On a point in the physiology of the nervous system not thoroughly investigated; and a peculiar form of paralysis." After assert the connection of this form with tabes dorsalis, he proceeds as follows:—

"General sensibility is not deficient nor mascular contractility, but the perception of movement. * * * * * The gait of these persons is peculiar; the incongruous movements which their limbs execute are not met with in ordinary paralysis. * * * As they have not the perception of their movements they supply its want by the exercise of the other senses, and especially in the sight; hence it is difficult or even impossible for them to walk in the dark."*

Next in order of time comes the celebrated case of Mr. Hanley, in which, without evident external cause, the loss of motion in the lower limbs gradually, and after several years, became complete without the sensibility being impaired. After death the substance of the cord in its posterior half, and in its entire length, from the pons to its lower end, had turned of a dark brown color, and was extremely soft and tenacious; all the other parts were healthy.† This was one of the first cases to shake confidence in the doctrine that the posterior columns are conductors of sensitive impressions.

In 1843, it may be mentioned, Canstatt‡ gave a complete history of the imperfect paralysis of the lower limbs connected with tabes dorsalis, and attributed the loss of power to *atrophy* of the spinal marrow, and especially of its lower end; but he did not distinguish the columns of the organ which were especially the seat of change.

Of all who earliest described this disease Wunderlich presented its characteristic trait most plainly in his work on Practice of Medicine in 1853–4. He particularly calls attention to the fact that there is not so much a loss of power in the limbs, as a peculiar insecurity and uncertainty in their function. "The patient," he remarks, "even when he has long been unable to take a steady step, can yet stamp vigorously on the floor, and in bed move his limbs freely without the least fatigue."

It is unnecessary to pursue this line of discovery any further, since enough of it has been examined to prove that the affection we have been studying was long ago described by its symptoms and lesions. To interpret them, however, required the light which Dr. Brown-Sequard has thrown upon them from the combined sources of experimental physiology and clinical observation. It is undoubtedly true, as that gentleman asserts, that locomotor ataxia is found in numerous spinal affections; for quite probably there are more instances in which the spinal marrow is injured in several of its divisions, than there are cases in which the lesion is strictly confined to its posterior columns. The latter must, however, be taken as the simplest and typical cases, the standards with which those are to be compared in which locomotor ataxia occurs as only of an aggregate of symptoms.—*American Journal of the Medical Sciences*, Jan., 1864.

A. S.

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*Quoted by Axenfeld, Arch. Gen. Aug, 1863, p. 214.
†Med.-Chir. Trans., xxiii. 80, 1840.
‡Handbuch der Med. Klinik., 2d edition, iii. 207.

Fractures of the Patella, treated by a Ring,

WITH CASES.

BY PAUL F. EVE, M. D.

Another benefaction has been given to humanity by the Profession, in the treatment of a very difficult, though fortunately not very frequent, accident. The name of Dr. W. A. Gibson, of St. Louis, U. S., will hereafter ever be honorably associated with the management of a fractured Patella; for by the suggestion of a *ring* he has not only simplified, but, we think, probably perfected a method for treating these cases, whether the bony solution be transverse, oblique, longitudinal, stellate, or by comminution. A moment's reflection will convince medical men that of all means proposed to retain the fragments of a fractured patella in contact, and thus promote bony union, instead of the ligamentous one usually obtained in practice, the ring must have great and decided advantage, and is so simple in application, that the thought almost involuntarily arises, Why was it not suggested sooner? And this is the more surprising when we consider the many various methods employed to keep the fractured parts in contact. The two plates of metal shaped like a horse-shoe, to fix and bring together the fragments, invented by the late Mr. Lonsdale; the plates with two sharp hooks, of M. Malgaigne, recently deceased; and the practice of Mr. J. Wood, of King's College Hospital, London, consisting of strappings encircling the upper and lower margins of the broken bones, and then crossing each other at the sides of the point to be fastened to hooks attached to a wide splint in the popliteal region would all seem suggestive of the value of a ring under these circumstances.

In the future treatment of fractures of the bone under consideration, a revolution may be predicted, and the prognosis, change, in the result, from ligamentous to bony union. For as Mr. Carsten Holthouse says, in "Holmes' Surgery," the great rareness of bony union in transverse fractures of the patella is owing simply to the difficulty of keeping the fragments in sufficiently close apposition; *when this is accomplished*, bony union occurs as in other fractures.

The idea so long entertained in treating fractures of the patella by position, so as to relax the quadriceps femoris muscle, we see by the October No., 1866, of the London Medical Times and Gazette, is now being abandoned, and Mr. Paget, at St. Bartholemew's Hospital, has been treating his cases for the past three years in the *horizontal position*. When, too, we reflect that only one (the rectus femoris) of these four muscles arises from the pelvis, while the others, the crureus and the two vasti, have their attachments to the shaft of the femur itself, we must be convinced how little position can effect in these cases. The fact is that after a day or two the muscles relax spontaneously, and the easiest and most unrestrained position of the limb has been found not only the most agreeable to the patient, but as good in its results.

We now give the case furnishing the occasion for introducing the ring in the treatment of fractured patella, followed by the two in which it has been employed in this city. Dr. Gibson published this in the September No. of the *St. Louis Medical and Surgical Journal.* The patient, Mr. James Ferree, aged 35 years, had been the victim of rheumatism, and having so far recovered that he could use crutches, in attempting to get into a buggy, felt a sudden shock, as if some one had hit him with a stone on the knee, and could scarcely be convinced that the fracture was caused by muscular contraction.

"The patella of the left knee was fractured transversely through its middle, the fragments separating about one inch. I did not admire any of the modes of treatment for the fracture, which I had ever seen recommended or used, and, while hesitating as to what plan I would adopt, it occurred to me that a ring would answer the purpose. I therefore took a measurement of the sound patella, and had a ring made of iron (allowing for padding), which I padded well with cotton wadding, cut in strips and wrapped around the ring, over which I applied a bandage. To each side of the ring I sewed strips of bandage. I then placed a well padded splint twenty-four inches long to the posterior aspect of the leg and thigh, which I secured by a few turns of bandage at the lower and upper ends, the bandage being loose so as not to interfere with the circulation. I next brought the two fragments of bone into apposition, and placed the ring around the patella, and tied the strips of bandage over the splint, thus securely holding the ring in its place, and keeping the broken bone always in complete apposition, thereby giving the greatest possible chance for a bony union. At the expiration of thirty days, I removed the ring, and commenced passive motion of the limb, and to-day (June 15th) he has good use of the limb. During the time this case was under treatment, I invited Drs. E. H. Gregory, J. J. McDowell, E. A. Clark, E. S. Frazier, and other physicians, to examine the appliance, and they all expressed the opinion that it was *just the thing* for a fractured patella. The advantages of the ring in the treatment of this troublesome fracture are so apparent that it seems to me hardly necessary to point them out. The appliance did not give the patient the least pain, and there was no interruption of the circulation by the bandages. It was impossible in this case for the patella to escape from the ring, but possibly in some cases, as of women, when there is a good deal of adipose tissue, and but little prominence of the patella, it may not be so easy to apply the ring; but I am persuaded that it will give entire satisfaction in all cases. I claim by the application of the ring to have reduced one of the ugliest fractures of the human frame to one of the simplest for treatment.

"I report this case for the information of the profession, feeling confident from the perfect success of this case that the ring has never been used before, or we certainly would have been familar with its use."

CASE 2D.—On Sunday, the 28th day of last October, I was called to Lawson Marshall, a young colored man, who, in a state of inebriation, by a fall on a rock, had fractured the left patella, directly transverse, in about the middle of the bone. There existed a separation of some two or more inches between the fragments. He had apparently a good constitution and was in excellent health.

The usual carved and straight splint was applied to the posterior surface of the limb after reduction of the fracture, as recommended by Sir Astley

Cooper, viz., by a broad belt around the lower part of the thigh, just above the upper fragment, then by a long bandage passing down from it at right angles on one side, under the sole of the foot, from which extension was made by ascending the other side parallel to the leg, and securing it to the same circular belt.

Within two weeks after this, the September No. of the *St. Louis Journal* was received, the case of Dr. Gibson noticed, and his practice at once adopted. The ring was worn five weeks, the latter three without the posterior splint. At first it was padded, then applied directly to the surface. It is made of brass, softer than iron. It has answered every purpose in the treatment, and numerous witnesses, besides our class, saw this case, and all bear testimony to the great value of this method. I consider it the perfection (humanly speaking) in the treatment of the fractures of this bone. One suggestion, however, is added, that the ring should be worn for three or four months, the patient being permitted to go about—mine refused to wear it longer than five weeks, making the whole treatment about seven weeks. The ring, too, might be slightly curved at the sides to which are secured the strips or bandlets to fasten it under the knee.

Case 3d.—By a railway accident, during the night of the 18th of December, Mr. G., aged 29 years, and of fair constitution, received an extensive contusion over the right lower extremity, falling, as he thinks, with his knee against the stove of the car, which caused a transverse fracture of the patella. Such was the injury to the soft part that twelve days were required of active treatment to subdue the resulting inflammation, and more than thirty, after it, the discoloration in the integument of the limb is quite apparent. In the meantime, the family physician, Dr. Thomas Menees, the President of the Nashville Medical Society, had consulted me in regard to the best management of the case, and when the ring, as advised by Dr. Gibson, was proposed, he at once approved of it, had one made and applied. It has now been worn uninterruptedly three weeks, keeping the fragments in close apposition, and there exists every prospect of a bony union.

The patient was up to-day, the 21st of January, in his chair. With nothing but the ring on, he stood upright, of course not on the injured limb, and commenced passive motions in the knee-joint. For security he still wears a splint of binders' board when out of bed.

Dr. Menees is fully satisfied that this simple treatment fulfils every indication, and is the best yet devised for a broken patella.

Feb. 1st.—This patient is out on the street, with a cane, ready to resume business. With the ring he not only walks well, but can flex the leg nearly at right angle without inconvenience.

A List of New Remedies.

THEIR APPLICATION, DOSES, AND MARKET VALUE.

Elixir of Chinchona, Pyrophosphated.—This preparation represents the alkaloids of Calisaya bark in their natural combinations with Pyrophosphate of Iron. A good wine (free from tannin) is somtimes made an ingredient of the preparation. This preparation has met with favor in cases requiring combination of ferruginous tonics with Peruvian Bark. The Pyrophosphate of Iron is in combination with Citrate of Ammonia and is not disposed to constipate. The Elixir is quite palatable, and well adapted to cases of women and children. Each dessert-spoonful represents about 20 grains bark and 2 grains of soluble Pyrophosphate of Iron. Dose, a dessert-spoonful. Price, per lb., $1.25.

Elixir of Valerianate of Ammonia.—The persistent taste and odor of Valerianate of Ammonia are well disguised in this preparation by judicious combination with aromatics. Brandy is sometimes used in the Elixir: A teaspoonful generally represent 1 grain of Valerianate of Ammonia. Dose, 1 fluid drachm. Price, per lb., $1.25.

Extracts, Fluid.—The fluid extracts of the pharmacopœia afford reliable and concentrated preparations. The recognized strength of the fluid extracts is such that 1 fluid ounce represents 1 troy ounce of the crude material. To this rule there are two exceptions, viz. :—Fluid Extracts of Wild Cherry and Peruvian Bark; these two are one-half of the above-mentioned strength.

Extracts of Meat.—A choice and convenient dietetic has been introduced into the market under this name. It consists of the juice of fresh beef free from fibrinoid or fatty matter, carefully evaporated to the consistence of an extract, which represents all the nutritive properties of the meat. Extract of meat affords a very convenient method of preparing beef tea and soup for invalids. In freshness of taste the preparations from the extract are equal to those made from beef. The extract represents about twenty times its weight of beef. Price, per package, 75 cts. and $1.50.

Hydrangea Arborescens.—Grows wild throughout the Middle and Western States. Has been used with much success in the form of a syrup of the root, made with honey, or a fluid extract, for the purpose of removing sabulous and gravelly deposits from the bladder when not too large to pass the urethra. It has also been used with satisfaction in some irritable conditions of the bladder. (See the *New Jersey Medical Reporter*, Vols. IV. and VII.) Introduced by Dr. E. Butler, through his son, Dr. S. W. Butler. Dose, a teaspoonful three or four times a day. Price, per lb., $1; fluid extract, per oz., 25 cts.

HYPOPHOSPHITES.—The Hypophosphites of Lime, Iron, Soda, and Potassa combined in the form of a syrup, or with Glycerine, have been used with much apparent success in cases of nervous debility and pulmonary affections. Dose, 1 to 2 fluid drachms. Price, per lb., $1.25.

IODIDE OF LIME.—This salt (which should, with more propriety, be called Iodide of Calcium) resolves itself, when in soluttion, iuto Iodide of Calcium, free Iodine, and Hydriodic Acid, with perhaps some Iodate of Lime. The advantage claimed for it is that it has less taste and requires a smaller dose than the Iodide of Potassium. Dose, 1 to 3 grains. Price, in 1 oz. bottles, per oz., $1.

IODOFORM, OR TER IODIDE OF FORMYLE, is used in place of the Iodides, with the supposed advantage of being non-irritant, and of more ready absorption and assimilation. It is used in combination with Quevenne's Iron, in pills containing 1 grain of each ingredient. Price of pills, per 100, $3.50.

IRON, IODIDE.—Pills of Iodide of Iron are made and coated with sugar so as to remain unaltered. This method of administration has been found very acceptable to patients. Price, per 100, 65 cts.

IRON, PER CHLORIDE.—U.S.P. The solution of the pharmacopœia directed for the preparation of tinct. Ferri Chloridi, is an excellent styptic, and useful as a stimulating astringent for ulcers of the throat. The solid Per Chloride is used with advantage to destroy fungous growths, and is especially useful in case of inverted nails. Price of solution, per lb., 50 cts, solid salt, per ounce., 25 cts.

IRON, PER NITRATE.—U.S.P. This preparation is intended to represent the solution introduced by Kerr. It is recommended in chronic diarrhœa and in some forms of dysentery. Dose, 6 to 10 minims.

IRON, PER SULPHATE.—Monsel's salt in a dry form, although affording convenience in carriage,—has the disadvantage of resolving itself during dissolution into an insoluable subsalt and an acid solution of the per sulphate. Monsel's solution, if properly prepared, is free from excess of acid, and is preferable as a styptic to a solution made from the salt. Price of solution, per lb., 50 cts.

IRON, PYROPHOSPHATE.—U.S.P. Is a compound salt containing Pyrophosphate of Iron and Citrate of Ammonia. The Citrate of Ammonia is necessary to render the Pyrophosphate of Iron soluble. This preparation is less liable to produce constipation than the other ferruginous preparations, and being almost free from chalybeate taste is well suited for delicate woman and children. Dose, 3 to 5 grains, to which Syrup of ginger can be added. Price, in 1 oz. bottles, per oz., 25 cts.

IRON, TINCTURE OF THE ACETATE. This is a favorite ferruginous preparation with many practitioners. While styptic to a considerable extent it is free from the inky taste of most of the preparations of Iron. Dose, 1 to 2 fluid drachms. Price, per pint, $1.

LITHIA, CARBONATE.—U.S.P. Recommended in cases of gout and gouty diathesis to eliminate Uric Acid from the system. Carbonate of Lithia is soluble in one hundred parts of water at ordinary temperature, and much more freely soluble in Carbonic Acid water. The dose of the Carbonate, is from 3 to 6 grains. Price, per ½ oz., 50 cts.

MANGANESE BINOXIDE.—Should be entirely free from other metallic oxides associated with native Manganese, and in a soft impalpable powder. It is recommended as a substitute for Oxide and Carbonate of Bismuth. Dose, 5 to 10 grains. Price, per oz., 50 cts.

MORPHIA MECONNATE.—This alkaloid, combined with the acid associated with it in opium, has had claimed for it less disposition to produce nausea than the usual Salt of Opium. Dose, the same as the sulphate. Price, per ⅛ oz., $1.50.

MAGNESIA, CITRATE, in a granular condition, giving an effervescent solution, affords facilities for the administration of this refrigerant laxative. It has the advantage of being less strongly acid than the solution as usually found in the shops. Sold in packages at 40 cts.

NARCIA.—One of the alkaloids from opium, has received attention as a Narcotic. It is claimed for it that it is simply sedative without toxic properties. The price, however, (about $100 per oz.,) is likely to interfere with any extended use of the remedy. It has been used in doses larger than is customary with morphia.

NICKEL, SULPHATE.—Has the properties of a gentle tonic, differing in effect from Iron. It has been used with advantage in cases of obstinate periodic headache, and in some rheumatic cases. Dose, ½ grain to 1 grain three times a day. Price, per oz., 40 cents.

OXYGEN.—Several preparations are advertised as affording a ready means of obtaining pure Oxygen gas in sufficient quantity for remedial purposes. The preparation known as "Robbin's Patent Oygensis," when mixed with water affords (without heat) a sufficient volume of pure Oxygen for practical purposes.

PEPSINE.—Prepared from the stomach of sheep, is growing into favor in cases of dyspepsia, and debility of the stomach following or attendant on exhausting diseases. Dose, about 15 grains to be taken before each meal. Sold in packages at $2.75.

PER MANGANATE OF POTASH.—Two articles are found in commerce. A crude manganate, which becomes Per Manganate in solution, and a crystallized Per Manganate. The former is sold at one-fourth the price of the crystal. It affords a strongly alkaline solution, which should be neutralized by acetic or nitric acid, if it is desired to use it on ulcerated surfaces, or internally. As a disinfectant it answers an economical purpose. Price of Crude Manganate, per oz., 10 cts.

PROPYLAMINE, CHLORIDE.—In acute rheumatism this remedy is used with benefit in many cases. Dose, 3 grains. Price, ½ oz., $1.25.

RHIGOLINE.—One of the light Hydrocarbon products from the distillation of Petroleum Oil. It is more volatile than ether, (boiling at 70° F.) It is used as a local anæsthetic, by means usually, of Richardson's spray-producing apparatus, either by itself or preferably mixed with ether. Price, per pint, $1.

SODA, CHLORATE.—Has for advantage over the corresponding Potash Salt, a much greater solubility, dissolving in 3 parts of water at 60° F. Dose, the same as chlorate of potash. Price, per oz., 25 cts.

SODA, SULPHITE.—U.S.P. Used in cases of yeasty vomiting, some forms of sore mouth attributed to a parasitic vegetable, dyspepsia and other forms of digestive derangements, and erysipelas. Dose, 1 drachm two or three times a day. As a wash, 1 drachm to 1 ounce of water. Price, per oz., 6 cents.

SODA, BISULPHITE.—Contains double the amount of Sulphurous Acid combined with the same amount of base as compared with the sulphite. One portion of the Sulphurous Acid is eliminated at a moderate temperature, reducing the salt to the sulphite. Used the same as the sulphite in much smaller doses. It has been used with apparent good effect in scarlatina, in doses of from 5 to 10 grains. Price, per oz., 15 cts.

Disinfectants.

Liquor Sodæ Chlorinatæ.—Decomposes sulphuretted hydrogen. Is sprinkled on the floor or bed in a sick room and added to the vessels intended to receive the excretions.

Chlorinated Lime.—Acting by its chlorine, which is but loosely combined, and which is promptly disengaged by carbonic, and with great rapidity by sulphuric acids, prevents or arrests animal and vegetable putrefaction.

Solution of Chloride of Zinc, (Burnett's Fluid).—Contains two hundred grains of Zinc to one imperial fluid ounce. Should be used largely diluted with water.

Ledoyen's Disinfecting Fluid.—Is a solution of nitrate of lead in the proportion of a drachm to an ounce, and has, in common with solutions of sulphate of copper, nitrate of copper, chloride of copper, and other salts, the power of destroying the odor of sulphuretted hydrogen; they do not, however, prevent the putrefaction of animal substances.

Chlorinium or Chlorine Gas.—Is the most powerful agent on the list of disinfectants; it is very readily evolved by the action of dilute Sulphuric Acid, upon a powder composed of common salt and Binoxide of Manganese in about equal parts. Care should be taken not to allow the air of the room to become too highly charged with the gas.

Nitric Acid Vapor.—Prepared by the extemporaneous decomposition of Nitre by Sulphuric Acid. Half an ounce of Nitrate of Potash, treated with Sulphuric Acid two drachms, will disinfect a space of ten cubic feet.

Ozone.—On dead organic matter undergoing putrefaction, Ozone acts rapidly, it entirely deodorizes by breaking up the ammoniacal products of decomposition, and can readily be obtained by moistening the interior of a large mouthed glass vessel, with old ether that has absorbed a good deal of oxygen, and plunging into the interior of the vessel a heated glass rod. A glass jar thus ozonized will retain the properties, and from an experiment in a foul privy, purified the atmosphere for several days.

Iodine.—Exposed in solid form, upon a small dish, and volatilized by gentle heat will quickly purify a room, occupied by contagious diease. Next to ozone it is the best disinfectant known.

The following summary of an article of Dr. T. H. Baker on disinfection is of importance to practitioners:—

1st.—For the sick-room, *free ventilation*, when it can be secured, together with an even temperature, is all that can be required.

2d.—For rapid deodorization and disinfection *Chlorine* is the most effective agent known.

3d.—For steady and continuous effect, *Ozone* is the best agent known.

4th.—In the absence of ozone, *Iodine* exposed in solid form, to the air, is the best.

5th.—For the deodorization and disinfection of fluid and semi-fluid substances undergoing decomposition, *Iodine* is the best.

Treatment of Persons Asphyxiated.

RULES.

1.—Treat the patient *instantly*, *on the spot*, in the *open air*, freely exposing the face, neck, and chest to the breeze, except in severe weather, and removing all tight clothing from the neck and chest, especially the brace. The points to be aimed at are first and immediately the restoration of respiration; and, secondly, after respiration is restored the promotion of warmth and circulation. Efforts to accomplish the latter object, beyond removing wet clothing and drying the skin, must not be made until the first appearance of natural respiration.

I. TO RESTORE RESPIRATION.—2. *Clear the throat*, by placing the patient gently on the face with *one arm* under the forehead; all fluids and the tongue itself then fall forward and leave the entrance into the windpipe *free*. Assist this operation by wiping and cleansing the mouth. If there be only slight respiration, or no respiration, or if the respiration fail, then

3. *To Excite Respiration*:—Turn the patient slightly on his side and apply some irritating or stimulating agent, as camphor or ammonia *near* the nostrils, (not *to* them) and dash cold water, or alternately cold and hot water, on the face and chest, previously rubbed briskly until warm. If satisfactory respiration commence use the treatment prescribed below to promote warmth and circulation. If there be no success lose no time but proceed

4. *To Imitate Respiration* (Marshall Hall's method) by replacing the patient on his face, raising and supporting the chest well on a folded coat or other article of dress, and turning the body gently but completely *on the side and a little beyond*; then again on the face, and so on alternately, occasionally varying the side. Repeat this movement deliberately and perseveringly *fifteen times only* in a minute. On each occasion that the body is replaced on the face, make uniform but efficient pressure with brisk movement along the spine between and below the scapulæ, removing the pressure immediately before turning the body on the side; during the whole operation, let one person attend solely to the movements of the head and the arm placed under it. While the above preparations are being proceeded with, dry the hands and feet, and as soon as dry clothing or blankets can be procured, strip the body and cover or gradually reclothe it, but taking care not to interfere with the efforts to restore respiration. Should these efforts not prove successful in the course of from two to five minutes proceed

5. *To Imitate Respiration* (Silvester's method) by placing the patient on the back on a flat surface, inclined a little upward from the feet; raise and support the head and shoulders on a small firm cushion or folded article of of dress, placed under the scapulæ. Draw forward the patient's tongue and

keep it projecting beyond the lips; an elastic band over the tongue and under the chin will answer this purpose, or a piece of string or tape may be tied round them, or by raising the lower jaw the teeth may be made to retain the tongue in that position. Take your place at the patient's head, grasp the arms just above the elbows, and draw them gently and steadily upward above the head and keep them stretched upwards for two seconds. (By this means inspiration is effected.) Then turn down the patient's arms and press them gently and firmly for two seconds against the sides of the chest. (By this means expiration is effected. Repeat the movements alternately, deliberately and perseveringly about fifteen times in a minute, until a spontaneous effort to respire is perceived, immediately upon which cease to imitate the movements of respiration and proceed

II. To INDUCE CIRCULATION AND WARMTH.—6. Rub the limbs upward with firm grasping pressure and energy, etc.; the friction being continued under the blanket or over the dry clothing, which has been substituted, if possible, for the wet. Promote the warmth of the body by the application of hot flannels, bottles or bladders of hot water, heated bricks, etc., to the pit of the stomach, the armpits, between the thighs, and to the soles of the feet.

7. Meantime, and from time to time, if necessary, to *excite inspiration* let the surface of the body be *slapped* briskly with the hand and cold water *dashed* briskly on the surface, previously rubbed dry and warm.

8. If the patient has been carried to a house after respiration has been restored, be careful to let the air play freely about the room. On the restoration of life a teaspoonful of warm water should be given; and then, if the power of swallowing has returned, small quantities of wine, warm brandy and water or coffee should be administered. The patient should be kept in bed and a disposition to sleep encouraged.

CAUTIONS.

1. Avoid the immediate removal of the patient, as it involves a *dangerous loss of time*—also, the use of the bellows or any *forcing* instrument; also of the warm bath, except as a momentary excitant.

2. Avoid rough usage, and do not allow the body to remain on the back unless the tongue is secured.

3. Under no circumstances hold the body up by the feet or roll it with a barrel.

4. Prevent unnecessary crowding of persons around the body, especially if in an apartment or confined space.

ASPHYXIA NEONATORIUM.

Excite the skin by brandy or the cold (60°) and hot (100°) bath alternately in connection with the above *postural respiration*, rubbing *upward* with pressure, etc.

The use of Sugar and Lactic Acid in the Animal Economy.

By Samuel Jackson, M.D., Emeritus Professor of the Institutes of Medicine in the University of Pennsylvania.

The chemical history of the sugars has been very thoroughly worked out by the researches of the chemists. As much cannot be said for its physiological actions and uses in the animal organism, or its relations with vital phenomena. On these subjects much valuable information has been obtained from the investigations of Liebig, Lehmann, and Cl. Bernard. They have not, however, so completely exhausted the facts as to render further observations unnecessary, or to cause additional suggestions to be thought obtrusive. With this view, it has appeared to me that a short review of this subject would not be inappropriate.

A brief summary of the principal chemical facts will be required in order to obtain clear ideas of the actions and uses of these bodies in animal organisms. There are several varieties of sugar marked by special characters. Chemists divide them into two kinds or species. The first division or species comprises cane sugar, beet sugar, palm sugar (produced and consumed in India), and maple sugar, with some others of less importance. They are named cane sugars, from their possessing similar chemical properties; and because the Chinese or sugar-cane was the plant from which sugar was first made in China, anterior to our historical era, and at the present day nearly 90 per cent. of the sugars of commerce is furnished by various sugar-canes.

The second kind or species of sugar consists of glucose or fruit sugar, which exists largely in sweet grapes, and in raisins or dried grapes, from which it has received the name of grape sugar. It is not peculiar to the grape, but is present in nearly all sweet-tasting fruit. The sugar of honey is identical with glucose, which is also the kind of sugar found in the liver, blood, and alimentary canal of animals, and in the muscles, lungs, amniotic and allantoid fluids of the fœtus in its early stages.

The chemical reactions of the two kinds or species of sugar are in strong contrast. The cane sugars are not decomposed by pure potassa and soda; while they are transformed into sugar of the second species or glucose by dilute acids and heat. On the contrary, the alkalies potassa and soda decompose glucose, forming peculiar brown-colored acids; according to M. Peligot, the melassic acid. Trommer ascertained that a solution of glucose to which sulphate of copper and potassa were added and heat applied, decomposed the deutoxide of copper of the sulphate by robbing it of one equivalent of oxygen, the protoxide thus formed, being insoluble is precipitated. This is Trommer's test for diabetic sugar in the urine. Modifications of this test have been made; that of Bareswil is convenient and reliable.

It has been adopted by M. Cl. Bernard, who has named it the cupro-potassic test for sugar. M. Becquerel ascertained by experiment that the cane sugars have no action on the deutoxide of copper, which is not reduced by them.

All the sugars proceed from the transformation of starch. The amylaceous and the saccharine groups of natural bodies are closely allied. They are nearly identical in chemical constitution, consisting of fixed equivalents of carbon (12) with slightly varying equivalents of oxygen and hydrogen in the proportions forming water—that is, from 10 starch, 11 cane sugar, 14 glucose or fruit sugar; or, in other words, they are compounds of a definite proportion of carbon with definite proportions of water. (*Payen.*) Hence their appropriate chemical name carbo-hydrates. From this sameness of composition, they are readily transformed into one another. Almost any organic matter in a state of change is capable of effecting this transformation of starch.

In the seeds of the cerealia and of maize an immense store of starch is annually laid up as aliment for man and animals. Close in contact with the germ in the seed, imbedded in starch, is placed a small albuminoid substance called diastase. As long as the seeds are kept perfectly dry, even for lengthened periods of time, no action takes place; but as soon as they are exposed to moisture and heat, the diastase exerts a catalytic or fermentative action and converts the starch into dextrine and glucose. Being very soluble, they immediately become the organizable substance from which is formed vegetable structure. They are promptly absorbed by the germ, and under its organizing force they are transformed into cellulose, the primary organizable material from which are constructed the primary cells and vessels, and the vegetable tissues and organs.

Mialhe has shown that a similar albuminoid (nitrogenized matter) exists in the mixed saliva. Its catalytic power is so great that one part will transform two thousand of starch into glucose. Some physiologists and chemists (Bernard, Robin and Verdeil) do not admit the existence of diastase as a special organic body. They regard it as an albuminoid or nitrogenized substance, in which a change or molecular action is set up by moisture and heat. Its action, they assert, is the same as that of other animal matter in a state of change or starch. The difference, however, is in time. The action of the mixed saliva is most prompt on prepared starch. When a teaspoonful of hydrated starch is held in a sound mouth with no defective teeth, and well washed, to remove any remains of food from between the teeth, in a few seconds it becomes very fluid (dextrin), in a few more it is sweet, and, if tested at once, sugar is found in abundance. This difference in time, in the activity of the agent, is in striking contrast with that of common organic matter in a state of change when acting on starch.

MM. Robin and Verdeil, from similar facts, deny that pepsin is a special agent in the gastric juice; they regard it as organic matter in process of change, which, with an acidulated fluid, will, they assert, digest articles of animal food. A fluid of that composition will dissolve raw or cooked meat, but requires fifteen or twenty hours to effect it. Nor has it been shown that the special peptone or albuminose, the constant product and object of gastric digestion, resulted from the solution of this artificial digestive fluid. This imperfect observation cannot be accepted in the face of the daily experience of healthy digestson accomplished in from three to four hours.

The conversion of starch as an aliment begins in the mouth during mastication, and if in small quantities, is there completed; but when the food is largely amylaceous, the greater portion arrives in the stomach, where the process is continued, but not finished. The unchanged starch passing into the intestines, is brought under the action of pancreatin and the intestinal juice, and is rapidly transformed into glucose. When animals are fed exclusively on starch for some days, a portion is found in the feces unchanged; the larger part has disappeared in the intestinal canal. (*Nehmann.*)

It has been denied that starch is ever changed into glucose in the stomach, or that it can take place in the presence of an acid. (*Fremy and Bohtron.*) This fact has been decided as respects the human stomach, by the experiments of Grunewald and Schroeder, who had under their charge a woman with a gastric fistula produced by a wound. They were communicated to M. Longet by M. Shift, who witnessed the experiment. "Some ounces of hydrated starch were introduced into the stomach through the fistulous opening while fasting. Immediately after some starch was expelled, which was found already to contain sugar. In a quarter of an hour sugar was found abundantly in the stomach, and the whole of the starch was fluid (dextrin)."*

M. Bidder asserts that the power of changing starch into sugar in the stomach persists in the presence of free acids; and M. Ernst Schroeder states that the saliva possesses its activity in the stomach, and rapidly transformed swelled starch (turgefactum amylum) into sugar.†

This error arose from making the experiment on dogs, in which starch is very imperfectly changed, if at all, by their saliva. Starch does not enter into the natural food of that animal, and it appears as though no provision was made by nature for an office not intended in the natural state. If this view be correct, it is confirmative of the theory that there is a special agent, diastase, in the salivary fluid. Longet expressly objects to the using of these animals in this investigation; he alleges that their saliva has a very low transforming power, and their gastric juice is very acid.

The experiments of Lehmann, Bernard, Longet, Corvisart, and others, have established the facts of the transforming power of the pancreatic and intestinal juices, and that dextrin and glucose are the common products into which all the amylaceous and saccharine substances in food are converted in the alimentary canal. Glucose must, then, be regarded as the *proper physiological sugar.* Bernard has proved its existence in the earliest stages of fœtal development, before the formation of the liver, after which it is chiefly developed in that organ. He detected it in the fluids of the amnios and the allantoid.‡ In seeking for the origin of this sugar, or the glycogenic matter which produced it, he observed in the placentas of rabbits and guinea-pigs a whitish sunbstace formed of a mass of cellules filled with sugar-forming substance. These last resembled in this respect the liver-cells of of the adult animal. In pursuing this investication, M. Bernard ascertained that similar epithelial or glandular cellules existed in the placentas of mammifers in the first period of embryonic life, producing a sugar-forming substance. This anatomical element of the placenta, in some animals of this class is mingled with the vascular portion of the organ, but in the ruminants it is separated in the form of epithelial layers on the amnios. In this manner, as Bernard had previously asserted, the fact is established that the production of an amylaceous sugar-making matter is a function common to ani-

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*Longet, Traite de Physiologie, vol. ii., p. 174.
†Ib., *loc. cit.*
‡Lecons de Physiologie, vol. i. Lecon xxi.

mals and vegetables. The provision of transitory structure for producing dextrin and glucose in the earliest stage of the embryon, proves its importance in the nutritive actions and the organizing processes. They appear to be constituent principles of the organizable matter from which organized structures are formed.* In extending his researches, he discovered the same kind of cellules containing sugar-making substance to be diffused in certain tissues in this stage of embryonic development. M. Cl. Bernard gives a full and very clear exposition of the experiments by which he ascertained the above fact. As these are not material in this discussion, I refer those who would wish to see the details to the original memoir, and limit myself to little more than a mere sketch of the results he obtained. 1. The tissue of the skin is infiltrated with the glycogenic matter, which is contained also in the cells of the epithelium, as demonstrated by the microscope. Obtained by a decoction of skin, it manifested its essential character of being changed into sugar by the action of strong acids and under the influence of animal or vegetable diastase. It possessed all the properties belonging to the glycogenic matter of the liver and placenta. It is found also in the corneous appendages of the skin, as hoofs, claws, &c.; it disappears as they become hard and organized. 2. The glycogenic cellules are readily demonstrated in embryons on the whole of the mucous membranes of the alimentary canal, from the mouth and tongue to the end of the large intestines; they are seated in the epithelium which covers the villosities. They also exist in the glandular ducts opening on the mucous membranes. 3. The same cellules are present in the mucous membrane of the bronchial tubes and of the nostrils. These cellules disappear, existing only during a limited period of embryonic existence; notwithstanding, the sugar-making matter remains diffused through the other portions of the pulmonary structure, and remains persistent until birth, as is shown by means of a decoction of the lung, in which it can be detected. 4. In the genito-urinary mucous membranes the same cellules are present during their evolution; they were found in the uterus, Fallopian tubes, bladder, ureters, and canaliculæ of the kidneys.

In the above instances the glycogenic cells and substance were observed existing in the first stage of development. They are only temporary; and as soon as the permanent epithelia are formed, they then disappear.

5. The muscles in the earliest state of development are preceded by embryonic cells in which no sugar-making substance can be detected by the microscope or by chemical reactions. But at a later period, when the histological elements appear, the glycogenic matter is perceived interposed between the nuclei, and gives its characteristic color on the application of the reagents employed. When the muscular fibre has acquired its development, the glycogenic matter then appears to be infiltrated in the substance of the fibre.

The smooth muscles contain the sugar-making substance, like the striated: it cannot, however, easily be detected by the microscope; but when a decoction is prepared from them, then it is found in great abundance, as it is when the striated are treated in the same manner.

The sugar-making substance is persistent in the muscles during the whole period of intra-uterine life, but disappear rapidly after birth.

It is a remarkable fact that the glycogenic matter in the fœtus does not exist in the nervous or osseous systems, or in the glands, appendages to the alimentary canal, as the salivary glands, pancreas (except in the epithelia of their ducts), and the glands of Lieberkuhn, the spleen, and lymphatic ganglions.

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*Comptes Rendus de l'Acad. des Sci., vol. xlviii., pp. 77-86.

The liver does not manifest any signs of the presence of saccharine matters until the middle of uterine life. At this time it has acquired its histological structure, and then commence its functions by the formation of bile and the existence in it of glycogenic matter. As the liver enters into functional activity, the glycogenic cellules and matters disappear from the placenta, its envelopes, and the tissues, that have been mentioned. Being a temporary organization and provisional function, at birth they have ceased to exist, and the liver enters on its permanent duties in the animal economy, lasting through life in its normal states.[*]

The preceding facts worked out by M. Cl. Bernard prove that in the first stage of the organic or nutritive actions, in animals as in vegetables, formative of plastic matter and organic forms, glucose is an indispensable agent. The organic, nutritive, and, as they may truly be named, vital actions, are identical in normal states through all the stages of existence, though, like all the functions, they are liable to be disturbed and perverted by various accidental influences. Yet the same law that presides over them in the embryonic state is persistent to the last span of life. It must be inferred from these facts that glucose is a physiological element in the vital or nutritive actions.

That nature, in milk, the food destined to nourish the young of the great class of mammalia, has made sugar a constituent, is a significant fact pointing to the same conclusion. Sugar of milk, in chemical properties, belongs to the first species, or cane sugars, and is convertible into glucose. —(*Lehmann.*

The liver holds a prominent position in the physiological history of sugar. The immediate connection of this organ with the presence of sugar in the animal organism is the great discovery of M. Cl. Bernard. He established as a primary fact that the introduction of saccharine matters into the liver by the portal circulation was incidental and intermittent, while the presence of glycogenic matter was persistent, and sugar was always to be found in the blood of the hepatic veins issuing from the liver. The proportion constantly supplied to the organism in this way was one 1 to 1.50. When it exceeds 3 of dried blood, it appears in the urine. These facts have been verified by all the prominent physiologists of Europe. Subsequently, M. Cl. Bernard completed this investigation by showing—first, that the glycogenic substance belonged to the liver; that the sugar may be completely washed out of that organ, removed from the body, and be again reproduced after a few hours; and, second, by procuring it in a purified state, entirely isolated from the liver and all animal structure. Obtained in this state it presented all the physical and chemical characters of starch and dextrin.[†] M. Biot tested it in his polariscope, and found a decided rotatory action to the right. An experiment of M. Pelouze is quite conclusive. He treated one gramme of this purified glycogene with fuming nitric acid, and obtained by the process xyloidine or gun-cotton, similar to that procured from vegetable starch. It was very combustible, and detonated at 186° C. It was converted also into oxalic acid, and by analysis gave a chemical composition that corresponded with the formula $C_{12}H_{11}O_{11}$. This glycogenic substance of the liver is transformed in the manner of starch into glucose, by an animal diastase existing in the liver and blood. There are numerous interesting facts connected with the glucogenic function of the liver, but which are omitted as irrelevant to my present object, which is to prove the importance of glucose and lactic acid in the organism as essential agents in organic or nutritive actions.

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[*] Compes Rendus de l'Acad. des Sci., vol. lviii., pp. 673–684.

[†] ComBtes Rendus, vol. xliv., p. 578.

This view might have been taken from *a priori* deduction. The immense amount of sugar and starch that enter into the food of man and animals, all of which are converted into glucose in the alimentary canal, are a strong indication of its necessity in sustaining vital activity. Dr. Stolle, some years since, estimated the cane sugars produced and consumed as food at 5,145 millions of pounds per annum.* Since then the cultivation of sugar has been extended, and the sorghum has been introduced into this country and Europe, the syrup of which is largely consumed. To this must be added the great amount of starch that forms so large a portion of vegetable food, together with fruits rich in glucose, as grapes, raisins, dates, figs, bananas, and other tropical productions, and the actual sum of glucose used up yearly in animal organisms will be found little short of double the above estimate. The extent of the cultivation, production, and consumption of the numerous substances for this one object, discloses an instinctive want essential to perfect animal existence, and to supply which nature has made ample provision. Although the exterior resources are so abundant, yet nature, in her foresight, has guarded against the many accidents that, in the eventful lives of man and animals, subject them to the total or partial want of vegetable food, has endowed the liver with its glucogenic function, by which the organism is supplied with glucose. In animals that die of starvation, this office is continued until about the third day before death. Life is protracted, and opportunity given for the intervention of new changes or more favorable events.

Having shown the physiological position and importance of glucose in animal organisms, the next step is to follow it in its changes to its termination. A characteristic of glucose is its little stability, less than that of any other member of its group, which adapts it to its special offices in the economy. It disappears from the alimentary canal and the blood, as has been previously stated, while cane sugar, injected into a jugular vein, reappears unchanged in the urine.

In healthy conditions, glucose never accumulates in the blood or is found in any of the secretions, though it is introduced into the circulation without intermission from the liver or the alimentary canal, or both. It must, therefore, either be destroyed or transformed into some other constituent. In certain conditions, not properly ascertained, the reverse takes place, and the blood and whole organism are charged with glucose, and the urine is loaded with it, forming diabetes mellitus. What those conditions are has not been clearly determined. In fatal cases of yellow fever the liver possesses a light ochre color, and, from a limited number of examinations, appears overloaded with an amyloid substance, with an entire absence of sugar. A somewhat similar state, but in less degree, it is said, occurs in fatal cases of bilious and intermittent fevers during the paroxysms. It would be an interesting inquiry to examine the liver in this point of view in all malignant forms of fevers.

(*To be continued in June No.*)

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*Joheson's Chemistry of Common Life, vol. i., p. 224.

Bibliographical Notice.

Watson's Abridged; a Synopsis of the Lectures on the Principles and Practice of Physic—Delivered at King's College, London, by Sir Thomas Watson. Abridged from the last English edition, with a concise but complete account of the properties, uses, preparations, doses, &c., taken from the U. S. Dispensary, of all the medicines mentioned in those lectures, and with other valuable additions, by J. J. Meylor, A.M., M.D., Philadelphia. Published by the author.

We have been extremely pleased with a perusal of this little work, for a copy of which we are indebted to the courtesy of the the author, and take pleasure in commending it to others. The value of Sir Thomas Watson's unrivalled work on the Principles and Practice of Medicines is too well known to the Profession to require comment or eulogy at our hands, and Dr. Meylor has succeeded admirably in condensing into the compass of a small pocket volume everything of importance to be found in the large work. Dr. Meylor's style is a model of clearness and brevity. In his abridgment each lecture is divided into parts by such side-heads as symptoms, treatment, causes, diagnosis, prognosis, &c., thus rendering it easy at a glance to obtain any required information. It will, we are sure, prove a valuable aid to the medical student, particularly in reading up with and following a course of lectures from the Chair of the Theory and Practice of Medicine; and, also, to the physician who, in the hurry and engrossing engagement of practice, will find in this unpretending little volume a mine of information adopted to his exigencies and requirements.

We append a short extract from a letter addressed by the eminent author of the original work, Sir Thomas Watson, to Dr. Meylor, in approval of his undertaking:—

"I assure you I am very proud of the favor with which my Lectures have been received in America, and I must offer to yourself in particnlar my best thanks for the honor you have done me in condensing them into a more portable and convenient form."

Books, Pamphlets, and Journals Received.

JOURNALS REGULARLY RECEIVED:

Atlanta Medical and Surgical Journal.
Boston Medical and Surgical Journal.
Buffalo Medical and Surgical Journal.
Braithwaite's Retrospect
Detroit Review.
Medical and Surgical Reporter.
Medical and Surgical Monthly, Memphis.
Medical News and Library.
Zeitschrift fur practische. Heilkunde.
Medical Reporter.
New York Medical Journal
Richmond Medical Journal.
Southern Medical and Surgical Journal; Price $5. Augusta, Ga.
Southern Journal of the Medical Sciences.
St. Louis Medical and Surgical Journal.
The Medical Record, New York.
The Savannah Journal of Medicine.
The Medical Reporter, (St. Louis).
The Dental Cosmos.
The American Journal, new series.
University Journal of Medicine and Surgery.

METEOROLOGICAL TABLE FOR AUGUST, 1864, AT HOUSTON.

TIME.		BAROMETER A. M.	BAROMETER P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE	1-3P M	SUN SET	MEAN THSR.	CLOUDS. A. M.	CLOUDS. P. M.	RAIN, FOGS, &C. A. M.	RAIN, FOGS, &C. P. M.	RAIN, FOGS, &C. NIGHT.
Mon.	1	98..05..	..00..00	30.04	0....S2-4	S2-5...2-4...S1-3	75	94	85	85	cicc7....ccci7	cucc5...cicu8....ci2		spr..	
Tues.	2	05..10..	09.05.04	30.07	0....S2-4	S2-4...S2-4..S2-4	76	94	85	85	ci2......cu5	cu4.....cu5....ccci1			
Wed.	3	05..08..	07....00	30.04	0....S2-4	S1 3...S2-4..S1-3	74	94	84	84	ci1......cccuci6	cccu4.. ....ci1			
Thurs	4	00..04..	00.95.92	29.98	0....S2-4	S2-4..SW2-4..S1-3	74	95	85	85	cc2......cucc5	cc8......cc2.......0			
Fri...	5	94..01.	00.93.95	29.97	0....S1-3	SE1-3W3-5S1-2S12	74	91	84	83	cc2......cucccі8	cuci7.dcicu8..dcicc6		spr.	
Sat...	6	96..05..	01.97.98	30.00	N0-1....W3-5	W1-3..E1-3..E1-0	73	83	83	80	cccu5....ncc10	dcicc8..cicc8...cistr	R.		
	7	03..08..	07.04.07	30.06	NE0-1...S1-3	S1-3. E2-5.NE1-3	74	90	78	80	cicc6.....cicc4	cccu8..cucc8..cucc4		shrs E & W.	ths.
Mon.	8	09..10..	10.05.03	30.06	0....S1-3	S1-3..SE1-2..S1-2	70	90	80	80	ci1......ccci7	cuccci5.....cudcici8			
Tues.	9	08..06..	00.97.94	30.00	0....S1-3	S1-3..SE1-3..E1-2	74	89	75	79	cuci2....cucc7	cucc6.cucc7. cucstr2		ths..ths	
Wed.	10	94..96..	94.85.86	29.90	0....S1-2	SE1-3.SE1-3.SE1-3	72	89	83	81	ciccu3...cuci5	cccu9....cccucu9			
Thurs	11	86..94..	93.88 88	29.90	SE0-1..SE2-4	SE1-3.SE2-5..S1-2	76	85	80	80	cccustr8.cccu7	cccu8..dcin10. dci10	spr.	spr.	
Fri..	12	98..96..	95.95.94	29.95	SE0-1..SE2-4	SE2-4..S2-4..S1-3	75	86	82	81	cicu3....cucc5	cuci7....cuci6....ci3		shr ths E.	
Sat...	13	00..07..	05.02.03	30.03	0....S1-4	S2-4...S2-4.. S1-3	76	92	84	84	cuci3....cuuc8	cuci5..cicu5..dcicc6	shr.	ths N	
	14	05..07..	06.00.99	30.03	0....S1-3	S1-3...S3-4...S2-4	74	92	86	84	ci2....cucc6	cuci8....cicu8...ci2		th N E	
Mon.	15	99..04..	03.96.96	30.00	0....S1-3	S2-4...S1-3...S1-3	76	91	84	84	cistr3....cucc7	cuccstr7.......cistr3		ths S	
Tues.	16	02..07..	..03..01	30.03	0....S2-4	....S2-4....S1-3	75	92	84	84	cicu2....cucc5	ccn10....ccn15		ths N shr W.	
Wed..	17	04..08..	06.98.98	30.03	0....SW2-4	S2-5..S2-4..SW2-4	76	74	73	74	ccs10....ncc10	ncc10..cc9..'ccustr9	R ths.	ths R.	R
Thurs	18	02..04..	04.99.97	30.01	0....SW2-4.	SW2-5..S2-4S..1-3	71	76	76	74	ncc10....ncc10	cucc8..cccu8..cccu5	R — — —	spr.	
Fri..	19	97..02..	97.95.96	20.99	0....S2-4	S1-3..SW1-3.S1-0	73	85	75	78	ncc10....ccn10	cc3.....cucc8....cu1	R — — —	ths S.	
Sat...	20	97....01	..97..97	29.99	NE0-1..NE1-3.	E2-3..E2-4.. E1-2	71	83	80	78	cc8..... cc9	cucc5....cc3....str1			
	21	97......	03.00.00	30.00	0	E1-3....E1-3....0	69	86	80	78	0	cucc4....cucc3... .0			
Mon.	22	05..08..	06.04.03	30.05	0....E1-3.	E1-3..E2-4.. E1-2	68	87	81	79	0.........ci1	cuci5..cuci7...cicu2			
Tues.	23	02..06..	05.02.02	30.04	0....E2-4	SE2-4..S2-4..S1-3	72	89	82	81	cicc2....cucc5	cicu6............ci3	spr. spr.	shr.	
Wed..	24	02..06..	05....02	30.04	0....S1-3	S1-3........S1-2	73	90	83	82	cicu3.,...cccu7	cucc4....cucc3...ci2			
Thurs	25	03..07..	06.04.03	30.05	0....S2-4	S2-4...S2-4...S1-3	75	92	84	84	cucc3....cucc5	cucc5....ccu6....ci1			L to N
Fri...	26	05..08..	07.05.04	30.86	0....S1-3	S1-3...S1-3...S1-2	75	91	85	84	cc2.......cccu5	cucc4.. cucc4....cc1	spr.		
Sat...	27	07..09..	08.05.05	30.07	0....S1-4.	S2-4....S1-3..S1-3	74	93	88	85	cistr1....cc2	cc3.......cc2......ci1			
	28	05..07..	06.02.01	30.04	0....S1-4	S1-4...S1-4...S1-3	75	94	88	86	cicc5 ...cc3	cc2..... cc2.....str1			L to S.
Mon.	29	03..07..	06 03.00	30.03	0....S1-4	S1-4...S1-2... 1-3	77	96	88	87	ci1......cc4	cc5....cucc4.....ci2			
Tues.	30	02..07..	06.03.03	30.04	0....S1-4	S1-3...1-3...S1-2	74	95	87	85	ccs1....cccu5	cccu5....cucc4 0			
Wed.	31	04..08..	07.03.03	30.06	0....S1-3	S1-3..S1-3..SE1 4	74	95	86	85	cucistr10....ci1	cc10....cucc5....ci1			
					Force of wind	as 2.67 is to 10.					Amount of clouds	as 4.83 is to 10.			

Max. range 30.10 ; min. 29.'85. 30.'01.83 mean for the month. 81°93 mean for the month ; max. temp. 96°. min. 68°

General Remarks.—7th—Rainbow 6. a.m. 11th—Shrs. in vicinity during the day. 25th—Small meteors numerous for several nights past. 26th—Shrs. to W. NE and S, but light. 28th—Wind high, at times, during the night.

METEOROLOGICAL TABLE FOR SEPTEMBER, 1864, AT HOUSTON.

		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE.	1-3P.M	SUN SET.	MEAN THER	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Thurs	1	05....08	05	......	0..............	....	76	94	84	85	ccs1..............	....	....	....	....
Fri...	2	05....07	13	......	....	....	73	93	85	84	clouds from 10 a.m.	more or less through	....	....	....
Sat...	3	91....04	97	......	....	....	73	94	84	84	....	the day.	....	....	....
	4	00..03..	97	......	....	....	70	..	..	..	....	....	....	....	....
Mon..	5	96....96	..90..89	29.93	....	.....S1-3.....S1-3	72	..	82	..	....	....cccu7.....cucc2	....	..shr......	....
Tues.	6	91..96..	95.96.95	29.93	0....S2-5....S2-4	S3-5..S2-5...S2-4	75	90	77	81	cucc3....cucc7.....	cuccci5........cucc8	shr..........	....shr.....	....R......
Wed..	7	04....09	..07..10	30.07	0....S2-4........	S2-5..S2-4...S2-5	76	91	79	82	cicustr5....cuci7....	cuci8.cudcici..8cc10	....	ths N & S..	....
Thurs	8	13 21..	17.15.15	30.12	0....NE1-3.......	E1-3..S1-3...S1-2	73	92	80	82	strci2....cuci7......	cucc5.cidcistr7cistr3	....	ths S.......	....
Fri...	9	15..17..	13.08.07	30.01	0....S1-3........	E1-4.NE1-3..N0-1	74	95	88	86	ccs3....cucc5.......	cucc4..cucc3..cistr1	....	....	....
Sat...	10	07..09:	06.01.01	30.00	0....E1-2........	NE1-4...E2-4....0	74	95	87	85	ccci5....cicccu4....	....cucc4.....cistr7	L S E.......	....	....
	11	03..06...	00.98.99	30.07	0....E1-3........	SE2-4........S1-3	75	93	87	85	ccs2....cu5........	cucc5...cucc5....ci1	L S E.......	....	....
Mon..	12	01..06..	04.99.98	30.52	0....SE2-4.......	SE2-4.SE2-4.SE1-3	73	93	84	83	cucc2....cucc5......	cucc8..cucc8..cuci3	....	....	....
Tues.	13	99..06..	04.01.99	30.22	0....SE3 4.......	SE1-3..S1-3..S1-2	73	85	77	78	cu1....cu6..........	cudci..8cicu7..cicu3	shr shrs SE .	ths SW. ths	....
Wed..	14	07..14..	12.08.07	30.11	0....S1-2........	S1-2..S2-4...S1-2	72	87	82	80	cu2....cucc7........	cu4..cu3..cccucistr5	L E....shr E	R shrs. W..	....
Thurs	15	12..17..	15.12.09	30.23	0....E1-3........	NE1-4.NE1-4.E1-2	73	91	86	83	ci2....cuci2........	cidci7.cidci7.dcistr9	....	....	....
Fri...	16	10..15..	11.07.06	30.10	E1-2....E2-4....	E1-3..E1-3..E1-2	70	86	81	79	cicu2.......cidcistr4	cc9..cccustr9..ccu10	....	....	....
Sat...	17	04..06..	04.97.97	30.61	0....E1-3........	NE1-3..E1-2.E1-3	73	77	75	75	cc10....ncc10........	.....ccci3........ci2	.....R.....	....	R..........
	18	95..01..	..96..96	29.98	N0-1....E1-3....	..E1-3........E1-2	67	87	83	79	cistr2....cicc3......	cucc8...cuci4...ccs2	....	....	....
Mon..	19	02..06..	05.01.02	30.04	0....E1-3....S2-4	W2-5..S2-4.SE1-2	69	88	80	79	cistr2....cc2.......	cccu3..ccci2..ccstr2	....	ths	....
Tues.	20	04..10..	08.06.06	30.08	E1-3....SE1-4....	SE2-4.SE2-4.SE1-3	68	88	80	78	cicc2....ci2.........	cicccu3cicu3cccustr4	....	....	....
Wed..	21	04..06..	04.97.97	30.01	0....S1-3........	S2-4..S2-4..SE1-4	65	88	79	77	ccs2....dcici2.......	cucc7..cucc....3cu1	....	....	....
Thurs	22	90..94..	90.84.84	29.99	0....S2-4........	S2-4...S2-5...S1-3	71	91	84	82	.....cucc8............	cucc5...cucc5.....cc1	fog, spr.....	....	....
Fri...	23	87..94..	92.88.92	29.91	0....S2-5........	S2-5..S2-5...S1-3	73	92	84	83	cu1....cucc6.......	cucc10.cicu7..ciccs8	......shr E	spr.........	....
Sat...	24	03..08..	10.05.08	30.06	NE0-1.....NW2-3	S2-4..S2-4....S1-2	75	85	83	81	cccucistr4.....cucc4	cc9....cc9. cccistr7	....	ths N.......	....
	25	13..16..	12.09.12	30.13	NE1-3....E2-4...	SE1-3 SE1-3.SE1-3	73	81	76	77	ccci8....cc9.........	cccu5...cuci5...cc2	....	....	....
Mon..	26	07..07..	05.00.99	30.03	E1-2....SE1-3..	SE1-4.SE2-4.SE2-4	71	89	81	80	cc10....cccu7.......	cccistr1....cc2.....	R...shr.....	....	....
Tues.	27	97..02..	....	......	0....S2-5........	....	75	..	..	..	....	....	....	....	....
Wed..	28	....	....	......	....	....	..	..	..	..	....	....	....	....	....
Thurs	29	....	....	......	....	....	..	..	..	..	....	....	....	....	....
Fri...	30	....	....	......	....	....	..	..	..	..	....	....	....	....	....
					Force of wind	as 5.02 is to 10.					. Amount of clouds	as 5.02 is to 10.			

Max. range 30.'21; min. 29.'84. 30.'03,68 mean for 25 days. 81°16 mean for 24 days. Max. range 95°; min. 65°.

General Remarks.—5th—Heavy peal of th. at noon. 10th—Yellow fever admitted to be in Galveston. 18th—No R. R. communication with Galveston on account of yellow fever. 24th—Ths. to N., shr to S., and spr. present about 12 m.

METEOROLOGICAL TABLE FOR OCTOBER, 1864, AT Houston.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE	1-3P M	SUN SET	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Sat...	1	..98..90	94	29.96							Cloudy till 11 a.m.				ths·
	2	99....98	97	29.98											
Mon .	3	04....07	10	30.07	Dry norther this	a.m., increasing									
Tues.	4	16....13	08	30.12	wind moderated	[till night.					Weather clear and	mild.			
Wed..	5	07... 98	00	30.02		and died away in									
Thurs	6	98....95	96	29.97		[the p.m.	62								
Fri...	7	04....04	06	30.05			66								
Sat...	8	20....16	17	30.18	Dry norther ear	ly this morning.	68								
	9	18....16	....	......			56								
Mon .	10	10....08	08	3C.09			66								
Tues.	11	15....13	14	30.14			67								
Wed..	12	16....12	10	30.13			67								
Thurs	13	13. ..07	06	30.10			70								
Fri ..	14	03....00	 97	30.00			70				Cloudy.				
Sat ..	15	03....99	00	30.01	Norther during	the night.	77				Do. Cleared off by	noon.	Damp in the	morning.	
	16	08....05	06	3).07	Norther moderat	ed.	60							gen e r a l l y	disagreeable
Mon .	17	08....07	09	30.08	Fresh norther.		58						Rainy and		
Tues.	18	13....15	07	3).11	Norther moderat	ed.	55				Cleared off by noon.	Sun warm.			
Wed .	19	07....05	04	30.05			56						Rainy.		
Thurs	20	10....10	14	30.12			50				Day very fine and	mild			
Fri...	21	29....28	30	30.29			49								
Sat...	22	30	....	......											
	23	....	07	......											
Mon .	24	97....94	93	29.95	Norther about	noon.									
Tues.	25	93....85	86	29.89	Norther not abat	ed.							Rain in the	forenoon.	
Wed .	26	86....80	89	29.85											
Thurs	27	05....03	03	30.04											
Fri ..	28	05....03	04	30 04											
Sat...	29	04....00	95	30.00											ths.
	30	00....98	98	29.99									Rain gene	rally thro'	the day.
Mon .	31	07. . 00	99	30.93									Rain at in	tervals.	

Max. range 30.'30 ; min. 29'80 ; 30.'04.75mean for 28 days, yet not entirely reliable, yet, no doubt, is nearly so-

GENERAL REMARKS.—1st—Ths. and heavy rain between 4 and 5 a.m. 5th—Weather fine generally. 6th—Do. 7th—Do. Sun exceedingly hot this p.m. 9th—Weather fine, but temperature changeable. 10th—Do. 11th—Do. 12th—Do. 13th—Do. 15th—Weather fine but cold. 19th.. Exceedingly cold through last night. 20th—Do. 21st—Fine and mild. 23d—Do. 26th—Very close day but fine. 29th thL and rain in early part of the night.

METEOROLOGICAL TABLE FOR NOVEMBER, 1864, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SNU.. RISE	1-3 MP	SUN.. SET.	MEAN. THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Tues.	1	99......	97....93	29.96	Strong norther.								Heavy rain.		
Wed..	2	95......	95... 97	29.96	Norther.								Rain.		
Thurs	3	03......	94....97	30.00	Norther subsid	ed at noon.									
Fri...	4	02......	99....06	30.03											
Sat...	5	03......	00....93	30.00											
	6	85......	82....84	29.84											
Mon..	7	80......	78....79	29.79	Windy and close						Cloudy.				
Tues.	8	85......	76....72	29.79	Do.						Do.				
Wed..	9	02......	90....09	30.04	Fine and cold.										
Thurs	10	17......	10....14	30.14	Do.										
Fri...	11	15......	12....09	30.12	Do.										
Sat...	12	14......	11....15	30.13	Do.										
	13	16......	14....15	30.15	Do.										
Mon..	14	08......	08....03	30.05								P.M. cloudy.	Slight rain at	night.	
Tues.	15	03......	04....07	30.05	Fine.										
Wed..	16	05......	97....03	30.01								Do.	Slight rain at	night.	
Thurs	17	07......	03....04	30.05							Day cloudy.		drizzling rain	all day.	
Fri...	18	07......	04....07	30.05							Cloudy.		Night rainy	and cold.	
Sat...	19	08......	03....02	30.05									Heavy rain.		
	20	97......	95....93	30.05	Night very cold	—norther.							Showery.		
Mon..	21	17......	17....18	30.17	Norther continu	ed.									
Tues.	22	40......	38....37	30.39											
Wed.,	23	30......	27....26	30.28							Cloudy and mild.				
Thurs	24	27......	26....26	30.26											
Fri...	25	26......	23....22	30.23											
Sat...	26	17......	18....18	30.15											
	27	00......	94....89	29.95											
Mon..	28	94......	90	......					72						
Tues.	29	96....06	..04..05	30.01			65	79	72	72					
Wed..	30	09....15	..08. 08	30.11	S S	S S	65	81	71	72					

Max. range 30.'40; min. 29.'72. 30.'06.28 mean for 29 days, yet not reliable, though, probably, nearly correct.

General Remarks.—4th—Fine but cold. 5th—Fine. 6th—Do. 13th—Yellow fever—light, with comparatively few deaths. In Galveston the peculiarity of the season and disease has been its prevalence among children and its mortality being great.

THE

Galveston Medical Journal.

VOL. II. JUNE, 1867. No. 6.

At what time does the Lochia cease in this Climate?

BY L. HUDSPETH,* M.D., HALLETSVILLE, TEXAS.

Most authors on this subject, at the time of writing, show their experience to have been in countries several degrees north of this, and it is evident that the same rule is not to be applied to the two climates; and, therefore, the difference in latitude is plain that there would be as much difference in the cessation of lochia as in the menstrual flow in the two latitudes. It is well known that the menstrual flux does not commence at so early an age in northern latitudes, and they do not continue so long, as in this southern climate, and, why not the same rule be applied to the cessation of the lochia? In reasoning we are compelled to agree, that the womb will be longer in returning to its normal condition in parturient women, in this climate, than in those who live in more northern countries, having for a guide the difference in the time of menstruating. Dewees, in his compendious System of Midwifery, p. 210, says:—"It is very unusual, in my practice, to see the lochia too abundant; on the contrary, very little of this discharge is to be seen after the fifteenth day, and sometimes it is over sooner. I have made it a rule to interfere whenever it has continued with any force beyond the tenth day." Meigs' Obstetrics, p. 274, says:—"By the tenth or fifteenth day many women have none but a whitish discharge, which also ceases between the twentieth and thirtieth day." And. again, on p. 314, the author last quoted says;—"It disappears in the third week, and sometimes earlier. Not a few women continue to have a show in the fifth week; and, in fact, the Jewish women had their purification at the fortieth day, which probably might be founded on observation, as well suited to the inhabitants of this country as to those of the Holy Land." Medical gentlemen, in their experience in midwifery, after the safe delivery of the woman, and giving the necessary instructions pertaining to her health, does not again see her, only through courtesy after the third day, unless called upon in case of suppression or too great a flow of the lochia, and, therefore, does not inquire into its cessation after the time laid down in works on this subject. There are so many diseases of the womb, and its appendages, with symptoms so much resembling those of a suppressed lochia, that, unless there is something like a rule to govern, the inexperienced might be found trying to establish a lochia, which had expired by limitation, and (vice versa) might be trying to stop a healthy lochia when it was a relief to that organ, and thereby cause disease of the womb. Nine out of ten women who have borne children are subject to a vaginal discharge, and, when asked if the lochia has ceased, will answer that it has, because there is no blood in the discharge, when, in all probability, there is a well established lochia going on. And, in this manner, doubtless, the practitioner is often deceived.

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*HALLETSVILLE, TEXAS, May 16, 1867.

GREENSVILLE DOWELL, M.D.:

Dear Sir,—If this article be found worthy of a place in your JOURNAL you may publish it: if not, do me the kindness to return it. It has been hurriedly written, and its deficiency is owing to a want of that deliberation which is so necessary for our thoughts to appear well on paper. Next winter I shall do myself the honor to visit the Medical College at Galveston, and spend some time there, and thereby get clear of the prejudices which all have for the place where we receive our medical instruction.

I am, Doctor, respectfully.

L. HUDSPETH.

Now, if it is true that a cessation of the menses, during gestation, is an act of nature to stow up nutrition for the fœtus for nine months, can the human system, in so short a time as five days—yes, fifteen after parturition,—get clear of the retained nutrition and not do violence to its machinery? I am inclined to the opinion it cannot, in this climate, the opinion of our American authors to the contrary notwithstanding.

Last year I delivered forty-four women, and I don't remember a single case, when I made it a point of observation, that there was a cessation of the lochia short of twenty-seven days. Now, should the practitioner not have something to rely upon as authentic and definite when consulted upon this subject? I am now treating a wife for ulceration of the uterus, and the husband of the same for balanitis; the former I believe to be, and the latter I am certain, is dependent on a cohabitation too soon after parturition, or before the lochia had ceased.

The object of this article is that the time of the disappearance of the lochia will differ so widely, in each undivided case, and the strength of the womb must determine the duration of the discharge. But, I wish it to be understood, that I do not think one case in a thousand will cease on the fifth or tenth day in this climate; and do hope that the attention of some accoucheur in this climate, in charge of a lying-in ward, be directed to this point, and obtain a more correct average time for the cessation of the lochia. Hence, I agree with you, the great necessity of medical societies being established in every county (as recommended in your JOURNAL) for the purpose of discussing important questions that so frequently occur in the science of medicine.

Abscessus Vertebrarum—Abscess of the Vertebra

WITH REPORT OF CASES.

The vertebræ are liable to decay and form pus, whether from chronic or acute inflammation or from depositions of tuberculous matter in their structure is not well established, or rather whether the tuberculous deposition or active inflammation is the primary cause, is disputed. I believe in most cases the disease is produced by a contusion from falling or jumping or direct blows which sets up a subacute inflammation, and this, by the continued pressure, causes disintegration, and, finally, the formation of pus, which is forced out into the soft tissues around the vertebræ and the spinal column leans to the side from which the absorption takes place, and from which the pus flows, if this absorption takes place, on the anterior portion of the body, the spine bends backwards and the spinous processes are pointed under the skin and the body thrown forwards and the head backwards. If one side of the body is absorbed the spine curves to that side and the head to the other; so the head turns usually to the opposite side from which the pus flows or opposite direction from the curve of the spine. This is necessary to maintain the centre of gravity and keep the head erect. The older surgeons and physicians have given specific names to these abscesses, naming them according to the part affected :—

I. *Cervical. Abscess.*—Where the disease affects the cervical vertebræ.

II. *Dorsal Abscess.*– Where the dorsal vertebræ are the seat of the disease.

III. *Lumbar Abscess.*—Where the lumbar vertebræ become absorbed and point on the back.

IV. *Psoas Abscess.*—Where the dorsal or lumbar vertebræ inflame and the pus trickles down the psoas muscles and points in the groins.

V. *Morbus Coxarius.*—When the haunch bones become diseased and form pus.

These abscesses are usually slow in formation, with dull and throbbing pain, sometimes for weeks, months, and even years before there is any appearance of pus or abscess to be seen or felt.

SYMPTOMS.

Cervical abscess is generally known by its forming below the ears and between the the chest a soft tumor with the head turned to that side if near the ear, and to the opposite if near the chest: provided the erosion is on either side.

If the body anteriorly is decayed, there will be a protrusion backwards of the space in which the vertebræ are absorbed, and a tumor in front and under or near the æsophegus gradually appears. The appetite is generally depraved and the respiration is seriously affected. Patient is, or soon becomes, ænemic, and will lie down or rest the head against some support or hold it between his hands.

In dorsal and lumbar abscess the patient first complains of gastralgia.* Dr. C. T. Taylor says this is pathognomonic of the disease and is attended with all others as general debility, loss of appetite, listlessness, disposition to lie down, to walk with a crutch, and never to run, jump, ride in a trot or in a rough carriage. Patient has flushes of head and night-sweats, generally a piebald or mottled skin, if the patient is over twenty, especially so in old patients.

These symptoms apply equally to psoas abscess.

Morbus coxarius is known by a stiffness of the hip-joint and a pain in the head of femer. This pain is often very severe, simulating synovitis of the joints and rheumatismus acute. The leg at first is curved and turned in or out, as the head of the femer is eroded to the right or left, but turned always to the side which is affected, after the abscess forms and the pus is discharged the leg shortens and contracts to an immovable position and there forms true anclylosis.

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*See Drs. Taylor and Lee on Curvature of the Spine and Infantile Paralysis.

CAUSES.

As before stated, contusions are usually the prime cause, and, in most cases, the only cause. A tubercular diathesis is the next most remote cause, and it is, in *all cases*, a great predisposing cause.

Bad and innutritious food, confined atmosphere, want of sun and light, all have a powerful predisposing effect. Lifting and carrying heavy weights, falls on the ice or pavements, falls down the stairs, out of trees, &c., &c.

Cold climates seem to predispose also to these affections, as they are seldom seen in this latitude (29°.15′); whether this is to the inclosure during long winters, or the want of sun light, or breathing bad and infected air, I am unable to state, but believe these combine to make the disease more frequent in northern than in southern latitudes.

PATHOGENE.

There is a remarkable resemblance in the lesion, whether it occurs in any of these places. There is loss of ossious tissue by absorption and suppuration of pure white or cream-like pus. This pus becomes incysted, or has its pyogenic membrane, which becomes pure mucus when opened to the air and secretes mucus and pus. The sac enlarges by absorption and assumes different positions and shapes according to the tissues that surround the eroded part.

When pus is once formed there does not appear any power in the constitution to produce a spontaneous cure, which is the case in most other inflammations if not too severe to prevent healthy respiration and innervation in the general system. This is, no doubt, owing to the constant weight and pressure on the part which, without mechanical means, must continue as long as the body is erect or any of the muscles surrounding the part contract, or as long as there is motion of one bony corroded part grating over another, which is produced whenever there is motion without extention of the muscles.

This teaches us and leads us to inquire what are our best modes modes of

TREATMENT.

The first thing to be done, in all and every case, is to relieve pressure and separate the joints, and give free and easy motion or, what is better, entire rest. This must be done by mechanical means alone.

For the cervical vertebræ we recommend as the best Dr.. Benj. Lee's apparatus; but, before applying this, we must make out the exact position of the lesion and the direction of the curve of the spine and endeavor to put it erect.

This is easily done by placing the patient as Dr. Bauer directs, in the erect position, and dropping a plumb-line from the top of his head to the centre of the feet for lateral curvature; for frontal or dorsal, drop the line from the top of the shoulders to the outer maleolus. This will readily indicate the line or centre of gravity, and the side to which the spine curves *is to be pressed upon*, and the side from which the curve forms a concave surface should be elevated and supported, bringing (in all cases) the angles of the vertebræ to their proper curves, which. in perfect health, is on the spinous process, from the head to the coxyx, and from the parietal suture at the top of the head through the centre of the shoulders to the ankle.

For remedies of cases of the dorsal or lumbar vertebræ we recommend the apparatus demonstrated in Dr. C. F. Taylor's work on Infantile Paralysis; and, in morbus coxarius, Prof. L. A. Sayre's movable joint splint.

Having applied our mechanical means well, so as to remove all pressure, prevent the sudden or severe contraction of the muscles, we must resort to hygenic means more than to physic.

Keep our patient as much as possible in the open air, exposed to light and wind. Feed him with nutritious food; get the blood rich and keep it so.

Exercise all the muscles except those involved, but not to fatigue the patient. Abstain from the use of tobacco, or any depressing anodyne; eschew any and everything that disagrees with the stomach; take food well salted and use universal diets as eggs and milk.

Medicines, as a general thing, are never reliable; but all those recommended for debility or the tuberculous diathesis are good and useful. Iodide of potash and sarsaparilla, bromide of potash, quinine, citrate of iron, tincture cinchonæ, turpentine emulsions, &c., &c.; small blisters over the seat of pain occasionally.

The most difficult part of the treatment is to deside *whether and when should we open these abscesses.*

Dr. Lee tells us the pus will be absorbed if the pressure be removed and the patient will gradual convalesce.

In this I will agree; but when it once forms it becomes quite a tumor *can this be be removed by absorption?* I believe not—I have never seen a case that did.

Is there any danger in opening them? I think not; it is sometimes a means of cure.

All surgeons and physicians now condemn moxas, setons and the actural cautery that were once so popular. Even blisters, such as we have recommended, are thought to be of doubtful utility.

For the further illustration of this subject we have reported the following cases:—

Mr. T. M. Thomas, of Columbia, Brazoria co., Texas, reported in *Nashville Medical Record*, Nov., 1859, from which we copy. Mr. Thomas it still living and following his trade—waggon-maker:—

PSOAS ABSCESS.

CASE 1.—Mr. T. M. Thomas—ætat 60—Lymphatic temperament. In November, 1857, Dr. Anger requested me to visit the above-named patient with him. We found him in the following condition:—He had a soft. pulpy tumor just below Poupart's ligament, on the right side. The skin was red and tender over the tumor. There was a distinct pulsation from coughing; the tumor could not be lessened by pressure to any great extent. Dr. Anger was in doubt as to whether it was psoas abscess or strangulated omentum hernia. He had been using warm and stimulating lotions, laudanum, iodine, &c., but to no effect. Mr. T. says he was hurt about two months ago by lifting a piece of house or rail timber, since which time he has had a dull, dead pain in the lumbar region and down the psoas muscles. From all this we inferred it was psoas abscess, but, to be on the safe side, we determined to wait two more days, and during that time to apply anodyne lotions. So the Doctor's prescription was continued with doses of citrate of quinine and iron as a tonic. On the third day the Doctor made a valvular opening with a trocar. Pulling the skin down well, and after passing the point of the trocar through the skin, it was slipped up and the point passed into the abscess. It discharged a considerable quantity of pure white pus. A strip of adhesive plaster was put over the orifice.

We gave him internally—

Iodide of potash, 1 oz.
Simple syrup of sars., 1 qt.

Took a tablespoonful three times a day—two hours before each meal.

On our visit three days afterwards the abscess had opened above where we had punctured it, and was discharging pus. It was dressed with simple cerate, and the potash and quinine continued as above for one week, then we gave the following:—

Iron, by hydrogen, 1 oz.
Simple syrup of sars., 1 qt.

Tablespoonful three times a day. Ten grains of citrate of quinine and iron every other day for eight days. Under this treatment he entirely recovered and is now well and hearty.

CASE 2.—Dr. Rubin Smith, of Sandy Point. The 10th of Dec., 1861, we received the following letter from Dr. Smith. He is the nephew of Dr. W. R. Smith, of this city:—

DECEMBER 3, 1861.

DR. G. DOWELL:

Dear Sir,—I have a large tumor seated on my back in the region of the right scapula. It is painless, and has been forming about six or eight weeks. At present there are few, if any adhesions; the skin is not implicated, and the tumor is still movable, but, I fear, if it remains longer adhesions will take place and render its removal more difficult. If you can make it convenient I would like you to come up and operate; I prefer being at home so that I can have better attention than if I was anywhere else. Please let me hear from you immediately. If you prefer coming up on the cars, I can send for you at Sandy Point any day that you will name. I would like to have it done as soon as possible.

Very truly yours,

R. SMITH.

As soon as possible I visited Dr. Smith, at his father's, on Oyster Creek, and found the tumor as he has described, lying upon the scapula, divided by the spine into two parts—apparent lobes. He had a curvature of the spine, and had been using shoulder-braces to straighten him up, and he had gotten better. He thought the pressure on the scapula was the cause of the tumors, and we thought it was there before and was only indicated by the pressure.

It was movable, and I believed it to be a fatty tumor in two cysts, so we concluded to excise it. On the 20th of December, in the presence of and assisted by Drs. S. A. Towsey, D. W. Oliver and ——— Tompkins, then of Sandy Point, all of whom had seen him frequently and counselled with him to have it taken out. We were, as I now remember, all of the same opinion; so we put him under chloroform, and I began an ovoid incision around the tumor, which was nearly as large as the fist. In cutting under it as I thought, I cut one of its points and out poured the pus. Put him upon quinine and iron, and bandaged the part tight as possible. Alternated with iodide of potash and sarsaparilla. Gave him porter, wine, and brandy, but it continued to suppurate, and I took him to my room in Columbia. Injected a weak solution of tinct. of iodine into the sac, and he coughed up blood. Repeated this several times but it done no good and he left worse than he came. Went to Sour Lake, in Hardin county, and was under the care of his uncle until he died, which took place in the fall, about 130 days after the operation.

REMARKS.

This is a remarkable case, showing that pus may find its way along the course of the levati anguli muscles to the back of the scapula and assume the appearance of a fatty tumor which was the case in this instance. Dr. Smith was a little drooped-shouldered ever since I knew him, and did not for once think of this being a dorsal abscess. Hence the great importance of using the exploring needle in all cases before operating. Had I used the exploring needle and seen pus I would have desisted from letting it out, except I could not reduce it by other means, when I would let it out subcutaneously and make pressure over the sac, as was done in Mr. Thomas' case.

E. Arnold, aged 40 years, a native of Maine, and a seaman on board schr. Kate, of Galveston, prior to his admission. He was sent to the hospital by the Custom-House on the 18th Sept., 1866, with lumbar abscess. He was operated on on the day of admission; recovered and was discharged cured on the 31st of December, 1866, having remained in hospital 116 days.

This man had a tumor over the spinous processes of the second and third lumbar vertebræ. It indicated that there was pus, and I opened it with a lancet, believing it to be a lumbar abscess. He told me he had had a severe fall, and he felt pain hereabouts ever afterwards. He was partially paralysed in his lower extremities, and walked with a sliding gait.

I put him upon the same treatment as was used with Thomas and he gradually got better and even fat. Quit having night-sweats, and walked around on his crutches. The abscess ceased to discharge pus for a long time before he left the hospital, but, now and then, it would discharge a little mucus and water. Sometimes it would not run for a week or two. He finally left for his home in New York and I have not heard from him since. He was quite fleshy when he left and could walk with a stick, though I kept him in bed on his side and back as much as possible up to the last day he was under my charge.

The use of Sugar and Lactic Acid in the Animal Economy.

By Samuel Jackson, M.D., Emeritus Professor of the Institutes of Medicine in the University of Pennsylvania.

(*Concluded from June No.*)

The conversion of cane sugars and amyloid matters of food into glucose is affected in the alimentary canal. In some animals, as dogs, this change does not take place in the stomach, as proved by Bernard, but is promptly effected in the duodenum by the pancreatic fluid. In the human subject, hydrated starch is rapidly converted into dextrin and glucose, absorption of which takes place to a certain extent. That absorption of these products occurs, is rendered highly probable by the fact ascertained by Bernard, that cane sugar, introduced largely into the stomachs of animals, is detected unchanged in the portal blood. A portion also is changed into lactic acid. This is admitted by both Lehmann and Bernard, who state that lactic acid is often formed in the stomach from glucose by the disturbing action arising from the digestion of the albuminous matter of the food.

Glucose is spread somewhat rapidly throughout the intestinal canal, being found in the cæcum often in an hour after its entrance. It exists as a thin, sometimes clear solution. It disappears in varying times, by two processes —conversion into lactic acid and by absorption. Diversities of opinion prevail on these points, but I follow chiefly Bernard and Lehmann as my authorities. After an abundant meal of saccharine or farinaceous substances, the small intestines are decidedly acid; strongest in the duodenum, and feebler in the ileum. Lehmann asserts that this free acid "is lactic acid, according to direct experiments." Butyric acid is often found in the cæcum and colon. The absorption of glucose is rendered apparent from its rapid increase in the blood after a full meal of amylaceous or saccharine food (*Lehmann*).

The diffusive power of glucose is feeble, and its endosmotic equivalent low; hence its absorption is slow, and varies with the strength of its solution. This fact may explain why it is so seldom found in the portal blood. from the difficulty of detecting it in small quantities in that heterogeneous fluid. The whole of the glucose coming from the exterior, the representative of the amylaceous and saccharine food is disposed of in this way by conversion into lactic acid, and absorption into the circulating fluid.

The final destination of the interior supply of glucose, poured in a continuous stream from the heart into the general circulation in normal states of animal existence, can have but one solution. Glucose cannot continue to exist under the influence of oxygen, heat and moisture, and in the midst of the unceasing conflicts of chemical atoms in the blood, and is transformed into lactic acid. Thus the final object of the vast provision of amylum and sugars in nature is to procure a constant supply of lactic acid, which thus appears indispensable for supporting vital activity in animal organisms.

This conclusion leads to a second inquiry, as to the uses of the lactic acid. Lehmann, in his *Manual of Chemical Physiology*, says, "the physiological importance of lactic acid must not be too lightly esteemed."* It is so constantly present in the animal economy, that it may be looked on as one of its constituents. This subject has not been thoroughly handled. Liebig quotes the question, "What purpose does lactic acid serve in the organism?" and says it is of peculiar importance.† He does not solve it. His conclusion is that it is employed to support the respiratory process.‡ Lehmann and Bernard have gone more fully into the discussion. Their views are from different stand-points, and are, of course, dissimilar, but are not incompatible, and may be each adopted. Lehmann's view is purely chemical and physical; Bernard's is physiological. They are presented in the following brief summary:—

1. The acid of the gastric juice has long been an unsettled physiological problem. Lehmann states, "it [lactic acid] is the actual cause, with hydrochloric acid, of the digestive power of the gastric juice."* It is certain that no other acids can take their place in an artificial gastric juice. Bernard, from numerous experiments, concludes that lactic is the natural acid of the gastric juice; and Liebig, from Lehmann's own experiments, by correcting an error, decides, "in that case the gastric juice contains lactic acid."‖

2. In the intestinal canal, during digestion of mixed food, albumen and gelatin peptones, the products of the digestion of animal food, become acidulated by the free lactic acid with which they are mixed. According to Graham, acid bodies possess great diffusibility; and Jolly has proved that alkaline bodies have a low diffusive power, but are strongly osmotic. Hence the acidulous digested peptones separated from the alkaline blood in the capillaries of the mucous membranes are rapidly transferred into the circulation by the active endosmose excited in this manner.

3. The lactic acid, by the same physical properties and by the above process by which it promotes the introduction of nutritive materials into the organism, effects the elimination of effete and recremental matters out of the system. This action is most marked in the muscular system, which forms the chief mass of the higher animals. The muscles are strongly imbued with a special juice (the muscular juice) contained in the interior of the fibrillæ. We are indebted to Liebig for a full knowledge of this fluid. It consists of the effete substances creatin, creatinin, and inosic acid, with alkaline salts held in solution by an acid fluid. Lactic and phosphoric acids, and lactates and phosphates,

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*Morris' Translation, p. 78.
†On the Chemistry of food, p. 101.
‡Ibid., p. 103
§Lehmann's Manual of Chemical Physiology—Morris's translation.
‖Chemistry of Food, p. 138.

cause its acidity, of which lactic acid is the most important. The elements of active endosmose are here present: an alkaline albuminous fluid in the fine capillaries on one side, and an acidulous fluid on the other, separated by little more than basement membrane, must cause a constant flow of the muscular juice into the blood, in which the above effete matters are found to exist, which are rejected by the kidneys, and again met with in the urine, except the inosic acid, decomposed in the circulation. Liebig denies the constant presence of lactic acid or lactates in the urine. He relates an experiment made with "three persons who took a quantity of lactate of potash sufficient to have yielded an ounce of lactate of zinc. Before the experiment the urine had an acid reaction; immediately after it was alkaline, and the potash was detected in it; it had disappeared in its passage through the blood." Lehmann concludes from* this ready combustibility of its alkaline salts that lactic acid becomes an important assistant in maintaining the animal temperature. This is true, but not more so than any other of the thousands of never-ceasing oxidations going on during life throughout the whole organism, each one contributing its mite, its minimum degree of heat. By this method nature secures the remarkable equilibrium of animal heat indispensable to health and existence.

4. The views of M. Cl. Bernard are almost extirely physiological. He lays down a proposition, or it may be termed a law, which it appears to me, must be admitted as the expression of an important truth. It is, whenever vital phenomena are manifested in acts of organization, two circumstances are to be kept in view: the first is the being, form, or tissue in a state or process of development; and next is the orgaizable matter or medium in and from which the development is taking place. The first will be passed by, as not of moment at this time, and I proceed to the second, in which will be found the examples of the principles it is attempted to establish.

Organic cells or tissues, when in the act of nutrition or development, must call incessantly on the medium of organizable matter that surrounds or bathes them for the materials of their organic composition. Two conditions are required in the organizable matter to adapt it for that purpose; instability of its chemical combinations, and an extreme mobility of the organic molecules, the pre-ordained arrangement of which gives origin to specific cells and tissues. These are the primary and essential phenomena of life, and enable the organic chemical elements to be grouped and disposed of uninterruptedly in thousands of modes under germ action. Animal and vegetable cells and tissues can be developed only from a plastic matter in which the organic chemical elements and the organic molecules are prevented from falling into a fixed or statical condition, in which consists the chemical and molecular stability, the characteristic of dead and inorganic matter. Dry gangrene and local embolism may be cited as examples.

This unceasing play of the chemical elements and of molecular activity, so essential to all vital phenomena of germ development, assimilation, nutrition, secretion, &c., are effected by chemical and physical causes and agents coming from the exterior. Of these the most active and powerful is oxygen; next in power and energy is lactic acid, not glucose. The mere conversion, new arrangement of its chemical atoms, could give no impulse to molecular and chemical disturbance in other bodies, even in contact. But lactic acid, as soon as formed, seizes on the alkalies, converts them into lactates, "which are destroyed as fast as they are produced."—(Liebig). In this instance we are presented with the extraordinary phenomenon, persistent through life, of the production of a complex chemical body in the blood, and its almost immediate destruction, apparently without a sufficient object. The lactates have feeble resisting power. Oxygen, at the temperature of the body, and in its active state (ozone), tears asunder the chemical atoms of the acid, forming carbonic acid and water, its oxygen is set loose in a nascent state (highest intensity of chemical force), and the alkalies escape through the kidneys. The blood, by these combined agents, oxygen and lactic acid, is the seat of intense chemical and molecular commotion. This state of the organizable matter, it has been shown, is a *sine qua non* of all vital actions. The enigma above stated is solved. The final result of this discussion is that the intention of the immense provision of amylaceous and saccharine substances in the food of animals is the constant production of lactic acid in the blood of animals, to assist in the support of vital motion in the blood. The mode of action of some deadly poisons bears confirmative evidence in favor of the doctrine. Carbonic oxide, hydrocyanic acid, sulphuretted hydrogen, chloroform appear to exert their fatal effects by arresting the chemical action of oxygen in the blood. Carbonic oxide expels the oxygen of the circulating fluid, though it retains the arterial hue even in the veins.—(Bernard). The blood, in poisoning by hydrocyanic acid, is of a dark hue, neither venous nor arterial; it is the same for sulphuretted hydrogen. Exposed to air or oxygen, the color is not changed. The same facts attend the poisoning by anconitia and veratria. The blood has been reduced to a quiescent state--to a statical condition, and sudden death is the inevitable consequence. Their mode of action on external bodies show the correctness of our explanation. They prevent fermentation, and arrest it when in progress. Now Pasteur has demonstrated that fermentation is a vital and not a chemical phenomenon, produced by the development and nutritive action of living organisms, vegetable and animal. In alcoholic fermentation sugar is decomposed by the torula cerevisia, which extracts a part of its carbon and hydrogen for its own nutrition. The remaining constituents enter into new combinations forming vegetable carbonic acid and alcohol. The vitality of the organism is destroyed by the poison, and the fermentation ceases. Modern physicists have demonstrated that light, heat, magnetism, and electricity, the great forces of nature, are varieties of motion. This investigation has led to a similar conclusion, that all purely organic and vital phenomena arise from atomic disturbance and molecular motion.

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*On the Chemistry of Food. J. Liebig, p 102.

In the preceding discussion I have adhered to the doctrine of M. Cl. Bernard that the heart injects without intermission into the blood, in normal conditions, a certain quantity of glucose. I am perfectly aware that the fact has been contested by Dr. W. F. Pavey. I have not been convinced by his facts or his argument. He starts with the assumption that all the examinations of the blood, before his own, had been made after death, and that no one had taken the blood from the right heart by catheterism except himself. In this statement he was certainly mistaken. M. Cl. Bernard, in his physiological winter course of 1855, on the 9th of January, in his fifth lecture, made a comparative experiment on two dogs, the one fasting, the other in the act of digestion after a full meal of animal food. The object of the experiment was to show "the physiological oscillations in the distribution and amount of sugar in the blood under the influence of digestion." This was done by taking portions of blood, from the right ventricle, the carotid, and the jugular of each animal. The blood was obtained from the right heart by catheterism—"*en partiquant une sorte de catheterism cardiaque*"—which was performed by a simple instrument, of which he gives a figure, and he designed a simple and neat method of operating which he describes. It is omitted for want of space. The results were that of the samples taken from the first dog (fasting) in that from the right ventricle alone was sugar detected in small amount; but those from the second dog all yielded sugar, that from the right ventricle quite abundantly, less in that from the carotid, and still less from the jugular.* These conclusive experiments appear to have been unknown to Dr. Pavey.

M. Chaveau, 1856, presented to the Academie des Sciences a series of experiments on the blood of large quadrupeds, as horses, asses, mules, &c. His connection with the Imperial Veterinary School of Lyons gives him great facilities for experimenting on animals. He collected specimens of blood from horses and dogs fasting from twelve hours to six days. The blood was obtained from the coxigeal, femoral, and carotid arteries and their collateral veins, and from the heart. A quantitative analysis was made with a uniform result; sugar was found in all the different portions of blood, that of the arteries giving the highest figures, and that of the veins the lowest. The blood from the two hearts was nearly the same. But the capital and decisive fact was the catheterism of the sub-hepatic veins through the jugular, after ligation of that vessel, and the auricle into the posterior vena cava; and the blood obtained was the richest in sugar. M. Chaveau remarks that his method was entirely physiological and not open to objection, ior in operating on solipedes, the animal was always standing (debout†).

I wish to state, in conclusion, that my young friend, Dr. W. F. Atlee, consulting surgeon at the U. S. Satterlee Hospital, two years since, treated gangrenous wounds with sugar. This discovery has been confirmed by Dr. J. H. Packard, one of the surgeons to U. S. Hospital, Beverly, N.J.‡ The active agent in this treatment is not the sugar, as supposed, but lactic acid, into which "sugar of milk, starch, grape sugar, and cane sugar are converted by *contact* with animal substances in a state of decomposition."—(Liebig). I would suggest to the gentlemen, surgeons of the U. S. Hospitals, in which this formidable affection has frequently prevailed, that they should give a trial of the effects of a direct application of lactic acid. It can be done very readily by using very sour milk. The wound ought to be thoroughly washed with milk, and cleansed of putrid matter, and then covered with pledgets saturated with the acid fluid frequently renewed.

This explanation is supported by the well-known fact, that the gastric juice, in which lactic acid is always present, is antiseptic, and arrests putrefaction.—*American Journal of the Medical Sciences*, April, 1865.

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*Lecons de Physiologie Experimentale, vol. i. lecon v., pp. 119-122.
†Compes Rendus de l'Acad. des Sci., vol. xiii., pp. 1008-21.
‡See January No. of this Journal.

Treatment of Gonorrhœa in the Female.

By JOHN J. BLACK, M.D., one of the Resident Physicians to the Philadeladelphia Hospital, Blockley.

The following is a *resume* of the treatment and its results as practised in one hundred and seven cases of gonorrhœa in the female during the menstrual period, and thus possesses an additional advantage in not causing a suspension of treatment during that time.

These cases were all thoroughly cured, having been examined ten days after treatment ceased, and found to be well.

We generally ordered one suppository to be inserted every other day, having found by repeated examination that the action of each continued at least that length of time, especially those of the iron, and those of the tannic acid and alum.

Then, to sum up:—We claim for the treatment of gonorrhœa in the female by vaginal suppositories the following advantages:—

1. Efficiency equal to, if not greater than, other remedies. 2. Cleanliness. 3. Portability. 4. Ease of application. 5. Soothing properties, while rags and like irritate. 6. Frequent application of speculum avoided. 7. Their presence not disagreeable. 8. They can be used at all times.

In regard to the strength of the remedies used, our experience with the suppository treatment has demonstrated that the combinations and proportions used in the accompanying formulæ are entirely satisfactory.

As to solutions for packing the vagina, we used them chiefly of three different strengths:—gr. iij ad oz. j.; gr. v ad oz. j.; and gr. x ad oz. j.; and altogether obtained much the best results from the three and five grain solutions. Even if the case was old and the parts almost destitute of sensibility, we still found, in the great majority of these cases, that the strong solutions were inferior to the weaker. Now and then we found one of those chronic cases, which we could overwhelm with a strong dose, but generally they proved irritating and rendered the patients uncomfortable for a time, whereas the milder proportions in like cases steadily and rapidly effected a cure. If we wished an immediate and positive impression, we now and then pencilled the walls of the vagina and cervix uteri lightly with solid nitrate of silver, and then kept the walls apart by inserting a strip of cotton cloth. We do not think that even this procedure had any advantages over milder and less unpleasant applications. In gonorrhœa within the cervix uteri we always used the solid stick of nitrate of silver, and with good results, as the membrane here seemed far less sensitive than that outside.

Where the gonorrhœa extended into the urethra, which was rare, we generally injected a three or five grain solution of persulphate of iron or nitrate of silver with most satisfactory results. Now, in regard to the remedies used, they were numerous, and each submitted to a fair and impartial trial:—

Persulphate of iron; nitrate of silver; permanganate of potassa; sulphate of copper; sulphate of zinc; acetate of zinc; tincture of iodine; and chloride of zinc.

We were pleased with the results from the persulphate of iron above all others, acting, as it did, as a powerful astringent and stimulant. From three to five grains to the ounce of water is the best proportion in which to use this salt. Next we preferred the nitrate of silver in the same proportions. Next to the nitrate of silver we obtained the best results from the sulphate of copper, seldom using it over five grains to the ounce of water. Next comes the sulphate of zinc. Next the acetate and chloride of zinc, in about the same proportions, using for the latter the liq. zinci chlor., from three to six drops to the ounce of distilled water. From the tincture of iodine we did not receive very favorable results. Diluted one-half. as recommended by some it proved very irritating, and produced excoriation of the parts. Still more diluted, its action was far inferior to any of the above mentioned remedies.

From the foregoing observations, then, we conclude, that in treating gonorrhœa in the female (and our experience is the same in non-specific inflammations of the vaginal mucous membrane), the milder remedies are superior to the stronger, whether the trouble be of longer or shorter duration. The comfort of the patient is more surely maintained; the disease more rapidly advances toward a cure, and the parts are sooner returned to their normal sensibility.

As not altogether foreign to the subject we wish to make known here the very favorable results obtained by us from the application of bromine as a caustic to chancre. It was applied thoroughly by means of a pine stick or glass rod to the sores, and then covered with an oiled rag for a few hours, and afterwards treated, generally, by what we prefer in these cases, the common black wash with extract of opium added. In a short time the slough comes away, and leaves a beautiful healthy granulating surface. It does its work thoroughly and efficiently, whether the chancre be hard or soft, and in the phagedenic chancre we found nothing whatever to approach it in effectiveness. One application was generally sufficient, and its virtue seems to rest in its great destructive power, which causes it to clear away at once the unhealthy tissue, which act it takes several applications of most of the popular remedies to perform.—*American Journal of the Medical Sciences*, July, 1865.

The Antagonism of Atropia and Morphia, founded upon Observations and Experiments made at the U.S.A. Hospital for Injuries and Diseases of the Nervous System.

By S. Weir Mitchell, M.D.; Wm. W. Keen, M.D., and George R. Morehouse, M.D.

During our connection with the U. S. A. Hospital for Injuries and Diseases of the Nervous System, we have been obliged to resort to every possible expedient for soothing the pain of those terrible cases of neuralgia, which in some shape are apt to follow as a consequence of neural injuries. Among these means incessant use has been made of hypodermic injections, which alone in many instances seemed able to overcome the anguish of certain forms of neuralgic distress. To what extent we have employed this mode of relief may be gathered from the fact that, at certain periods of our service, the resident surgeons made every day from twenty to thirty subcutaneous injections. In one case half a grain to a grain of morphia was injected thrice a day, and the man finally recovered after having used nearly four hundred injections.

We were naturally led to examine with care into the pretensions of the several agents which have credit for the power to lessen or destroy the sense of pain. The results of this inquiry were of the more value, because they were confined to these agents by injection only, and because they were studied by more than a single observer. Our investigation brought us finally to consider the therapeutic relations of atropia and morphia, to which subject the greater bulk of this paper will be devoted.

The information which our note-books give in regard to the comparative value of remedies used to allay pain, is the result of an almost unexampled experience, and we shall not hesitate briefly to relate it before passing on to our main topic.

After repeated trials of conia, atropia, and daturia, with the intention of relieving pain by their subdermal use, we ceased to resort to them. On the other hand the employment of morphia, or of some preparation of opium for subcutaneous use, became a part of the everyday routine of practice.

Like others, we have met with certain inconveniences attendant upon this mode of employing morphia. In rare cases it always caused distressing sick stomach, but as the pain for which we used it was oftimes agonizing, the patient usually preferred the sick stomach rather than fail of the delightful relief he obtained from the injection. In these instances it was commonly observed that the morphia ceased after a time to produce either nausea or emesis.

The local annoyances resulting from injections so long continued and so numerous, were sometimes very embarrassing, for though in some men the could be used in the same limb week after week, in others the numerous punctures produced a very unpleasant increase of sensitiveness in the part. Such an instance may be found on page 131, case 31, of our treatise on wounds and other injuries of nerves. In other persons the injections gave rise to occasional abscesses, and in a soldier who was at one and the same time the subject of a very painful wound of the arm, and of a cold abscess on the back, every injection gave rise to a large indolent abscess. One instance of erysipelas following the use of an injection was seen by us.—(Op. cit. p. 150.)

As the opinion of many good observers is quite decided as to the fact that the injection gives the same relief, whether made near to or remote from the seat of pain, we may with reason be asked, why we used so many injections in the same limb or neighborhood. The answer lies in the fact that our patients very early, and we ourselves later and more reluctantly, reached the conclusion that the point at which the the injection was to be employed was not a matter of indifference. In the milder instances of neuralgia a subdermal injection of morphia used anywhere in the body did give relief, but in cases of "burning neuralgia," such as we described in our book on nerve wounds, page 100, *et seq.*, the nearer we could bring the agent to the place where the pain was felt, the greater was the ease obtained. We are the more anxious to insist upon this matter, because we neglected to make the same comment when detailing our mode of treating these lesions in the volume above mentioned. The belief thus reached is certainly not altogether unphysiological, as we very well know that morphia is capable of causing a local paralysis of sensory nerves, with which it may come in contact,

While conducting the inquiry, some of whose conclusions we have just stated, it occurred to us that possibly the antagonistic influences of morphia and atropia might be so utilized as to enable us usefully to employ them together or in succession. With such a purpose subdermal injections of the two medicines were used, sometimes together, at other times one after the other. The result of these observations proved at once so interesting and puzzling that we finally entered upon a deliberate course of experiments with the intention of ascertaining in what respect and to what degree, and through what periods of time, the two drugs in question were antagonistic. While the final conclusions thus reached by us have served in a measure to strengthen the belief in the mutual power of these agents to counteract one another in the economy, they have also brought to light a range of very curious facts, which we think are novel, and which could certainly not have been learned from any course of experiments upon animal lower than man.

And here it is not unfit that we should criticize the loose way in which therapeutic inferences have been drawn from experiments upon animals, where of necessity poisonous doses have been employed, and their effects studied. Most of the symptoms which ensue when a course of any ordinary narcotic has been taken are so completely subjective that we can learn their existence only by the statements of the person who feels them. Even when these drugs are given in poisonous doses to animals, it does not follow that the resultant symptoms will, either in degree or in kind, correspond accurately to those which occur under like circumstances in man. Dr. Anstie, in his recent work on narcotics and stimulants, has very well illustrated this proposition. We ourselves have seen a dog recover after the subcuticular injection of *twenty five grains* of atropia thrown in divided doses into various parts within a few minutes.

The temptation to study poisons in cold-blooded creatures is always very great, because in these animals certain facilities for toxicological study are presented which do not elsewhere exist; but as might be expected, analogies fail us more and more as we pursue our researches upon creatures remote from man. No more striking example of this is to be met with than one of us, Dr. Mitchell, has recorded in the *Journal de la Physiologie* for January, 1862, where the author details at length a series of experiments upon snapping-turtles, whom he attempted to poison with woorara.

In this paper it is shown that while only one-nineteenth of a grain is required per pound of the animal to destroy a rabbit within a few minutes, the snapping-turtle is poisoned with difficulty, and not surely by one-seventh of a grain for each pound of its weight.

It would be easy to extend these examples, and to show, not that we should cease to use animals for the study of poisons, but that in order to appreciate properly any toxic agent, we must follow its effects through a wide range of created existence from vegetable to man, and that its therapeutic uses are to be learned only from its influence upon the being to whom finally it is to be of medicinal value.

The experiments which we shall now relate were most of them made upon soldiers who were suffering from painful neuralgic diseases, or from some cause entailing pain. In some cases, however, convalescent men were the subjects of our observations, but in no instance were they allowed to know what agents we used, or what effects were expected.

All of the drugs employed were injected under the skin, so that we desire to have it most distinctly understood, that we do no extend our inferences and results to the administration of these same drugs by the mouth. Thus given their rates of absorption may vary so as to produce no inconsiderable modification of their relations to one another, although, as we very well know, their general antagonism would remain the same.

Antagonism of Atropia and Morphia.—The mass of evidence in favor of this belief is now considerable, and has increased since Dr. Wm. F. Norris summed up in a very excellent paper in the number of this journal for October, 1862. And while the positive evidence in this direction has gained largely, it has been shown repeatedly that the negative evidence derived from experiments on animals is not to be trusted, although to it Dr. Brown-Sequard (*Jour. de la Phys.*, Oct., 1860, p. 736) has given the sanction of his great authority.

Assuming, therefore, that there is such a peculiarity of power in these two alkaloids as to enable them in man to neutralize one another physiologically, as acid and alkali may do chemically, certain questions arise with which we here propose to deal.

If it were clear that these two agents acted in some simple direct way upon an economy equally as simple, the problem before us would indeed be like the case of acid alkali, and present to us little that was confusing or difficult to comprehend. If, on the other hand, each of these drugs acted with equality of force, but in opposite ways upon numerous organs of a complex being, the question would even then be simplified. But it seems to us that although both atropia and morphia have a wide range of influence in the body, that they do not act opponently throughout the whole sphere of their activity, while in some part at least, there is even a certain amount of correspondence between them, or at least the appearance of this.

We shall consider first the effect of morphia and atropia upon the circulation and respiration, and shall then observe whether a different result occurred when the two were given together in doses such as experience taught us were therapeutically equivalent.

Do these two agents act differently on the circulation, and if so, do their effects neutralize one the other? This question was answered by a series of observations in which certain doses of either morphia or atropia were injected subcutaneously and the result studied.

Effects of Morphia on the Circulation and Respiration.—The subjects of our experiments were men free from fever. Some were suffering from neuralgia, and some were men in very fair health, suspected of malingering. The doses used were, one-third or one-fourth of a grain of sulphate of morphia in solution. The patient was kept recumbent for some time before and during the observation.

The above amounts produced no striking effects on the circulation. In two out of eighteen cases the pulse rose from 6 to 10 beats within a half hour. In 6 it did not alter materially during several hours, and in 10 it fell an average of 8 beats only. The respiration was as little affected. It appears then that in persons free from fever subdermal doses of one-third to one-fourth grains of sulphl. morphia do not conspicuously influence the heart or lungs. It is proper to add that the pulse became fuller under the morphia, and that this was at its maximum when the general influence was greatest.

Effects of Atropia on the Circulation and Respiration.—In about one-third of our cases the pulse fell within four or ten minutes after the injection of one-fifteenth to one-thirtieth of a grain. The fall did not exceed eight beats in any case. In the remaining cases the pulse was unaffected for a few minutes, but in one and all there was a rapid rise after the seventh or eight minute—a rise which at its maximum was rarely less than fifteen beats, and in most instances forty beats per minute. The pulse reached its highest number within an hour in the great mass of our cases.

The fall was more gradual. At or about the fourth hour the pulse was commonly beating nearly the same number as it did when the observation began. It continued to fall, however, and the minimum was reached at the tenth or eleventh hour. From this period it rose again to its normal starting-point, which it attained within the twenty-fourth hour.

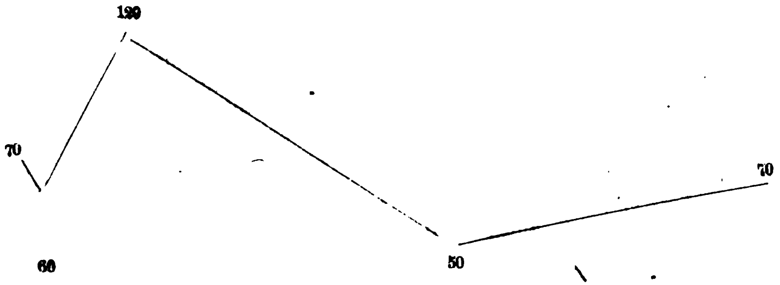
Shortly after we began to make these observations, Dr. J. C. Da Costa, in charge of the wards for diseases of the heart, in Turner's Lane Hospital, studied the influence of atropia upon the heart in a large number of cases of soldiers affected with functional disturbances of that organ. He obtained results which do not differ essentially from ours, except that the primary fall of the pulse was more constantly noted. We are under the impression that we should also have met with it more frequently if our first examination of the pulse had always been made within the first five minutes after the injection of the medicine.

The following records may answer as examples of the general character of the changes in the pulse-rate after a single full subcutaneous dose of atrophia:—

INJECTED UNDER THE SKIN OF THE ARM.

One-thirtieth grain of sulph. atrophia.		One-fifteenth grain of sulph. atropia.	
Pulse	80		
7th minute	76	Pulse	62
17th do.	106	10th minute	56
30th do.	108	27th do.	108
48th do.	106	80th do.	94
90th do.	88	3d hour	64
3d hour	78	4th do.	62
5th do.	60	6th do.	66
2th do.	56	8th do.	64
10th do.	52	10th do.	50
14th do.	60	24th do.	70
24th do.	78		

Taking the above cases as illustrations, the pulse curve under atropia might be thus represented:—



The force of the pulse, as well as its fullness, was notably diminished throughout the rise in its number.

We, as well as Dr. Da Costa, were much struck with the fact that the rate of respiration did not increase as the pulse rose. Indeed, in many instances the number of respirations fell or remained unaltered, while the heart beats ascended from 70 to 120 per minute.

In the next series of experiments we endeavored to learn whether, when full doses of morphia and atropia were injected together, the pulse would be modified so as to alter the curves which we have drawn as expressing its changes under the use of the latter agent.

These observations were checked by two other sets of experiments. In one we gave a full dose of morphia subcutaneously, and when the pupils were well contracted, or the cerebral influence clearly marked,, the atropia was employed. In the other we gave the atropia first, and when it began to show an effect on the pulse we injected a full dose of morphia.

In each and all of these methods we obtained like results, the pulse obeying the same law as when atropia alone was injected; in other words, behaving as though no morphia had been employed.

It thus appears that the influence of atropia an the pulse and respiration is in no way altered by the use of full doses of morphia, so that in this particular their supposed antagonism does not exist.

Effect on the Eye.—It is needless to show anew that atropia dilates and morphia contracts the pupillary aperture. Our observations consisted in using injections of both drugs in succession or together so as to note how the influenced the iris. Their antagonism was here very plain. When, in the case of a man whose pupils were dilated by atropia, we gave morphia, the pupil began to lessen within half an hour, and either became normal or else contracted. It was noticeable that the accommodation often remained paralyzed for an hour or more after the pupils had been relieved from the effects of the atropia.

These observations taught us also that when neutralizing doses of the two drugs were made use of the influence of the morphia was sure to pass away first, so that the pupils would become dilated again within five to ten hours, or unless a second dose of the morphia were given.

It was of course found difficult to regulate the doses so that they should always neutralize one another precisely, even for a brief period, and hence it was common to see, as above stated, a condition of complete antagonism prevailing for a time only, when one or other medicine would dominate the system. As a general rule, about one-quarter of a grain of morphia will neutralize for a time one-thirtieth of a grain of atropia, but the latter acts far longer than the former.

We may infer that these two agents counteract one another as regards their power to alter the size of the pupil and affect the ciliary muscle.

The *effects of the two drugs upon the cerebral functions* were studied separately, with care, and then in a second series of observations they were used together or in succession.

When in any particular case we found that some of the well-known specific effects of either drug was always and markedly shown, we tested the antagonism as to this symptom by giving the other agent.

Here, as elsewhere, the judgment is apt to be led astray by one of the drugs overlapping, so to speak, the period of the one's activity.

We feel confident, however, that the following symptoms, caused by atropia, for instance, are lessened or lost when the system is under the action of opium.

The headache and phantasms of atropia are certainly thus controlled, as well as the partial deafness and visual defects, which, in high doses, it occasions. On the other hand, when morphia has been fully used, the drowsiness and stupor, which are the best tests of its power, disappear before the influence of atropia.

In like manner the opium pallor and flush from atropia may be modified or dispelled. Perhaps the most peculiar cerebral symptom of atropia is its tendency to cause phantasms and illusions. We found that under doses of one-twenty-fifth of a grain these were common, and in some men could always be thus brought on. Usually they were absent so long as the eyes remained open, but arose at once upon closing them. This condition was singularly subdued by morphia.

Drowsiness caused by morphia was as surely lessened or destroyed by the counter-agency of atropia; and, in fact, atropia, given alone in full dose, is very apt to cause a restless night to follow, so that it is assuredly in no sense a true hypnotic.

Both morphia and atropia check the secretions from the mucous surfaces, so that in this respect they can scarcely be deemed antagonists, although the influence of atropia in drying the mouth is much the more striking of the two, while it has no tendency to constipate the bowels, and even in some cases produce loose stools.

Nausea.—Morphia was very apt to cause nausea when injected subcutaneously. In some men it never failed thus to affect them. When to such porsons we gave the two drugs in equivalent doses—that is to say, doses which controlled the pupil, and perhaps after a time dilated it—we still found that nausea occurred as when only morphia had been employed. Here again the antagonism fails.

Effect upon the Bladder.—As regards the bladder, we obtained results which very much surprised us. It is well known that morphia causes dysuria in some persons. This is apparently due to a partial and temporary loss of power to contract that viscus. That such is the cause is shown by the sluggish motion of the stream of urine which flows, when, by a great effort, the patient has succeed in beginning to micturate.

We found, to our surprise, that in many men injections of one-fifteenth to one-thirtieth grain of atropia sulphat., used subdermally, gave rise to a state of things so exactly similar, that one might have supposed it the effect of morphia. Consequently, when we selected such cases to test the antagonism of the two drugs in this particular, we were prepared to find that the dysuria was in nowise modified. Indeed, in some of these instances the symptom was so conspicuous as to give rise the suspicion that the exhibition of the two agents together had occasioned a greater difficulty of urinating than arose from either of them when used alone.

It thus appears that, as regards the bladder, atropia and morphia do not antagonize one another, and that there is some reason to suppose that they act alike on this organ.

Pain.—The most important use of morphia in medicine is to lessen pain. Its power to do this we are naturally disposed to associate with its sleep-compelling virtues; yet, in reality, the two powers are distinct enough, although both are possessed by this potent drug. How much apart they really are may be learned by the fact which we have discovered, namely, that while atropia destroys the narcotic effect of morphia, it leaves nearly undisturbed its power to lessen or overcome pain.

This interesting conclusion was thus reached: Several cases of intense neuralgic suffering were selected. In each of them we ascertained, by repeated trials, what dose of morphia would restore the patient to entire ease. Next the same patients were treated with full injections of sulph. atropia, $\frac{1}{15}$ to $\frac{1}{48}$ grain, in order to see whether or not it would control the pain. How utterly wanting in this power it seemed to be, we have already stated.

The third series of observations consisted in injecting the two drugs together or in succession. Somewhat to our surprise, the morphia still appeared to possess its full and perfect power to destroy the sensation of pain.

These experiments were so varied and so numerous as to leave us no room to doubt the correctness of our final belief, that, as regards its anæsthetic property, morphia is not counteracted by atropia.

It would have been easy with larger leisure than ours to have further inquired as to the effect of the two drugs upon urine, and as to the possibility of their antagonizing one another in that direction. Enough has been done by us, we trust, to show that the question as to the physiological antagonism of atropia and morphia has not as yet been fairly answered.

If we be correct in the views expressed in the foregoing pages, certain practical lessons of some value may be learned from them.

If atropia lessens or destroys the unpleasant influence of morpia on the cerebrum, but does not alter its power to allay pain, there seems to be no reason why we should not use them together so as to obtain all that is best from the morphia with the least amount of after discomfort.

We have certainly had good results from such a use of both drugs, in the form of suppositories, in cases of disease of the bladder or generative organs.

Again, it is sometimes desirable to use either drug in very full doses. This we may do quite fearlessly when assured of our ability to restrain its action by a full exhibition of its opponent.

The foregoing experiments and observations authorise us, we think, to draw the following conclusions as to the use of hypodermic injections, and as to the antagonism of atropia and morphia:—

1. Conia, atropia, and daturia have no power to lessen pain when used subdermally.

2. Morphia thus used is of the utmost value to relieve pain, and is most potent, in certain forms of neuralgia, the nearer it is applied to the seat of the suffering.

.3 Morphia lowers the pulse slightly or not at all, atropia usually lowers the pulse a few beats within ten minutes, and then raises it twenty to fifty beats within an hour. The pulse finally falls about the tenth hour below the normal number, and regains its healthy rate within twenty-four hours.

4. Morphia has no power to prevent atropia from thus influencing the pulse, so that, as regards the circulation, they do not counteract one another.

5. During the change of the pulse under atropia, the number of respirations is hardly altered at all.

6. As regards the eye, the two agents in question are mutually antagonistic, but atropia continues to act for a much longer time than morphia.

7. The cerebral symptoms caused by either drug are, to a great extent, capable of being overcome by the other, but owing to the different rates at which they move to affect the system, it is not easy to obtain a perfect balance of effects, and this is made the more difficult from the fact already mentioned, that atropia has the greater duration of toxic activity.

8. The dry mouth of atropia is not made less by the coincident or precedent use of morphia. Atropia does not constipate, and may even relax the bowels; morphia has a reverse tendency.

9. The nausea of morphia is not antagonized or prevented by atropia.

10. Both agents cause dysuria in certain cases, nor is the dysuria occasioned by the one agent relieved by the other.

11. Atropia has no ability to alter or lessen the energy with which morphia acts to diminish sensibility or relieve the pain of neuralgic disease.

12. As regards toxic effects upon the cerebral organs, the two agents are mutually antidotal, but this antagonism does not preval throughout the whole range of their influence, so that, in some respects, they do not counteract one another, while as concerns one organ, the bladder, both seem to affect it in a similar way.—*American Journdl of the Medical Sciences*, July, 1865.

Two Cases of Ovariotomy.

BY E. R. PEASELEE, M. D., LL. D.,

Ovariotomy is no longer, by any means, an uncommon operation; and the following cases are reported mainly from their bearing upon certain questions of great practical moment respecting the manner of performing the operation itself:—

CASE 1.—Mrs. C. A., aged 42 years, married, and a mother eighteen years since, first noticed an enlargement of the right side of the abdomen in August, 1863. This gradually increased till I first saw her, in consultation with Dr. Hubbard, of this city, in October, 1864. At this time her circumference was fifty inches, the lower extremities were very œdematous, the pulse 115, the appetite almost gone, and the strength much prostrated. I diagnosticated a polycystic ovarian tumor, and advised tapping; both because the tumor was interfering with respiration and digestion, and because I found the patient was then too much prostrated to allow of ovariotomy.

On the third of October I tapped her, assisted by Dr. Hubbard, and removed twenty-three pounds of fluid from the principal sac. The œdema of the lower extremeties, however, did not disappear, as usual, after the tapping, though the patient's strength and appetite increased somewhat. But the sac rapidly refilled; and though the case afforded much below the average probability of success. I did not feel at liberty, to oppose the patient's wish, after informing her of all the risks, that I would give her the only remaining chance of life; and I removed the tumor on the 8th of December, 1864. Present—Drs. Hubbard, J. Foster, Thomas, Conant, and Field, of this city.

I should state here that the weather was very unfavorable for some days before and a week after the operation (incessant rains and fogs); but I did not deem a delay justifiable, on account of her rapidly failing strength.

Operation.—The incision extended from one inch above the symphysis pubes to four inches above the umbilicus, eleven inches in all; as it was found that a shorter incision would not admit of the removal of the tumor after all the larger sacs were evacuated. Some very firm adhesions were found to the left of the umbilicus, and others of a slight extent and firmness on its right and in the right iliac fossa. They were all broken down by the introduction of the hand; having been previously detected by passing around the tumor, and between it and the abdominal walls, a polished steel urethral bougie, previously dipped in the artificial serum I am accustomed to use.

A double ligature (three threads of saddler's silk, waxed, but not twisted) was passed through the pedicle, each half tied around one-half of the latter, and both cut off close to it, when the tumor was removed. The incision was then closed by seven harelip needles, one inch apart, below the umbilicus, and six silver sutures between them. Above the umbilicus there were six more silver sutures. Thus the incision was closed throughout, the stump of the pedicle remaining *in situ* in the peritoneal cavity. All the needles and sutures included the peritoneum as well as the rest of the abdominal parietes. A compress wet in warm water and covered with oil silk, and a flannel bandage, were applied to the abdomen, and the patient removed to her bed.

The patient died on the seventeenth day after the operation, and the following is a brief *resume* of her progress in the meantime:—

Was restless and prostrated till one a.m., when reaction was fully established, and pulse 118. The excitability somewhat abated at midnight, when gtt. xxx. McMunn's elix. opii. were given per rectum. Slept about three hours. The enema or an opium pill per rectum was required two or three times daily during life, and thus regular sleep was usually secured each night. The catheter was used every six hours for six days, the urine being always free and normal. The compress was changed twice every twenty-four hours, and milk-porridge given as a nourishment the first five days.

First day after operation.—No pain; pulse 116 to 120; skin natural; is very comfortable, and slept well the following night.

Second day.—Pulse 116 to 120, and stronger; a little more heat and dryness of the skin; no pain.

Third day.—Pulse 112 to 120; has suffered for several hours from colic pains, and there is some tympanites. Introduced rectal tube, and removed the gas; used pill opii. per rectum, to relieve the pain, and had to repeat it twice in twenty-four hours for several days for this purpose.

Fourth day.—Pulse 112; had a slight alvine discharge; more tympanites and collection of gas, which was removed as yesterday. Gave brandy drach. j. every two hours. Not much sleep till from four to eight o'clock next morning.

Fifth day.—Pulse 102 to 104; quite tympanitic, but gas passed freely through tube. Wine-whey given, since beef-tea and milk-porridge acidify. A good night ensued.

Sixth day.—Pulse 102 to 110; much as yesterday; a small alvine discharge this afternoon; exhausted by the pain, and did not sleep much to-night.

Seventh day.—Pulse 100 to 112; feels exhausted. An enema of infus. menth. virdis Oij, to remove the gas, succeeded well; when patient slept well, and pulse fell to 98. Bladder more irritable yesterday and to-day, and catheter used every two or three hours. An enema of beef-tea oz. ij, and port wine oz. ss every four hours.

Eight day.—Pulse 100, and quite strong; less tympanites; countenance better than hitherto. No opiate during this day.

Ninth day.—Better every way; pulse 98, and good. Repeated enema of menth. vir. with success. Two alvine discharges to-day, from a laxative given last evening; most comfortable day yet. Port wine oz. ss and beef-tea every two hours. A good night followed.

Tenth day.—Less tympanites; pulse 96 and good; incision had united by first intention throughout, but it is now opened at lower part for half an inch, and oz. ss fetid pus escaped below the lower pin; it appeared to be caused by a ligature around one of the needles. Brandy substituted for the port wine, and tinct. cinchonæ comp. to be given (drach. j.) every three hours. Tympanites not increased; no tenderness of abdomen yet, except as due to the distension; not much sleep to-night.

Eleventh day.—Pulse 94, and strong; tympanites much reduced; tongue better (has never been much affected), and she for the first time speaks of having some appetite, and relishes toast and tea; discharge fetid, and about drach. ij.; erysipelatous redness, at lower border of the incision. Pulse 100 and weaker during the evening; more tympanitis.

Twelfth day.—Pulse 94; tongue somewhat red; erysipelas extends over lower six inches of the incision. Removed all the needles in this part, and applied adhesive straps instead. Discharge fetid (drach. ij.); not much tympanites. Incision looks better this evening; erysipelas not extending; less tympanites. Has taken brandy and beef-tea every two hours.

Thirteenth day.—Pulse 96 to 104, and weaker; no appetite; feels depressed, though she slept well last night; tongue better, but still red; erysipelas disappearing, and the discharge is less, but the incision is now laid open *down to* the peritoneum all the way below the umbilicus. To take quiniæ sulph. gr. j. every three hours.

Fourteenth day.—Pulse 100 to 102, and soft; looks better and had a good night; tongue redder, and dry in middle; abdomen better in all respects; very little discharge from incision.

Fifteenth day.—Pulse 102, and weaker; at 11 o'clock last night vomited a green and intensely acid fluid; also twice afterwards. 1½ p.m. pulse 112, and weaker; has just got over a *chill* which last an hour. 11 p.m., pulse 120; feels a little dizzy; discharge more fetid again, and edges of incision redder.

Sixteenth day.—Pulse 120, and weak; had but little sleep last night, and is very dizzy; a fetid pus discharges (oz. ss) from lower end of incision and behind symphysis pubis. I inject water and liq. sodæ chlorinat. (Oj to drach. iij.) into the cavity, and syringe it out thoroughly. 9 p.m., she is much exhausted, and I increase the amount of stimulants.

Seventeenth day.—Pulse 122, and weaker; tongue slightly dry and red; can take no food by the mouth; incision beginning to heal throughout; discharge less fetid; no dizziness. She has emaciated rapidly during the last four days, and has had slight tenderness of abdomen during the last forty-eight hours, since the chill before mentioned, and which has not recurred. She is failing, but the brain is unaffected. At 9 p.m., she became dizzy, at 9½ the hearing was lost, and at 10 she died, without a struggle, from mere exhaustion.

Post-mortem eighteen hours after death.—Abdomen very tympanitic. Incision open *down to* the peritoneum throughout its length, except some bands, one-eight to one-half an inch wide, extending across the spaces between the needles below the umbilicus, and two others above the latter, one inch and half an inch long respectively. The opening of the lower end of the incision did not penetrate the peritoneum, but entered an abscess extending behind the left ramus of the pubes.

There was very light peritonitis, and some exudation into the peritoneal cavity. At the site of the principal adhesion of the tumor was a thick adhesion of the recently exuded plasma.

The pedicle of the tumor was atrophied, but *no slough* had occurred. The ligature around the largest portion of the stump had nearly slipped off; the other was still *in situ*, and covered by an exudation already somewhat organized. The peritoneum was united everywhere behind the incision, so that the discharge could not enter its cavity when the incision itself reopened. Both kidneys were very much congested, the left most so; and the mucous membrane of the stomach was in an extreme state of softening.

CASE II.—Mrs. J. S., of Buffalo, N.Y., 58 years of age, strong constitution, and the mother of two healthy children, first had symptoms about eight years ago, which she for several years imputed to "neuralgia." As a tumor of some kind became apparent, she, in June, 1862, consulted Dr. White, of Buffalo, who diagnosticated an ovarian tumor of the right side. During the following year the tumor increased very little; and in June, 1863, she consulted Dr. A. Flint, Sr., of this city, who referred her to me. I first saw her in October following, when, the tumor not having increased during the last four months, I advised non-interference with it till some more urgent symptoms arose. In June, 1864, I found the patient was suffering from the greatly increased amount of fluid in the sac. During the preceding winter there had been considerable œdema of the legs and feet, but it had now nearly disappeared. On the 16th of July I tapped her, and drew off twenty-eight pounds of a clear fluid from a single sac, the abdomen at this time being forty-seven inches in circumference. For three months afterwards she enjoyed good health, and the fluid did not re-accumulate. By the first of March, 1865, she had, however, increased to forty inches, and being in a condition suitable for the operation, I decided to perform it. On the morning of the 7th she took oz. j. ol. ricini, which produced a free evacuation from the bowels. Milk-porridge was the only nourishment given for the two days preceding and the three following the operation. The latter was performed on the 9th of March, 1865, in the presence of Drs. Barker, Emmett, Kammerer, Conant, Field, McQuesten, and Janvrin, of this city, and Dr. P. S. Connor, Assist. Surg. U.S.A. The atmosphere of the room was kept moist by the evaporation of boiling water, and at 78° Fahr.; the bladder was evacuated, and sulp. ether administered;* and at 4½ I commenced the operation with an incision in the linea alba four inches long, extending downward from a point one inch below the umbilicus. But very slight hemorrhage occurred, which was controlled by pressure and torsion of two small arteries. The peritoneal cavity was then opened, the incision through the peritoneum being three and a quarter inches in length. I used a large polished steel sound, as in the preceding operation, to ascertain the existence and extent of adhesions, if any; but found that there were only some very slight ones above, to the omentum. The sac was then evacuated by tapping, twelve pounds of a heavy albuminous fluid being drawn off; and the sac itself removed through the incision. A very slight hemorrhage occurred from the omentum where the adhesions had been torn away, which was controlled by the application of one silk ligature. The pedicle was treated precisely as in the preceding case. The right ovary was the one diseased, and the empty sac weighed four and a half pounds. Having sponged the edges of the incision thoroughly, and seen that no blood had entered the peritoneal cavity, and that all oozing from the incision had ceased, I closed the latter throughout its length by seven silver sutures, including the peritoneum. Between the silver sutures were also introduced some superficial silk sutures, which brought the edges into perfect coaptation. A wet compress and flannel bandage were then applied, as in the preceding case. The patient having nearly recovered from the effects of the ether, and the pulse being 80 and of good strength, at 4½ o'clock I gave gtt. xxx. McMunn's elix. opii, and the following report shows her subsequent progress:—

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*All these preparations were also made in the preceding operation.

Almost constant retching continued for twenty-four hours (which was ascribed to the ether), during which time ice was taken, and an enema of gtt. xxv. McMunn's elix. opii. was used. Some nausea continued through the next day. Reaction was fully established by 11 p.m., and the pulse was constantly between 72 and 82 during the whole period of recovery.

The compress was changed every twelve hours till the incision was finally closed, and the catheter was used every six hours for the first three days only. Fifteen drops of McMunn's elix. opii were give every six to eight hours during the first six days, as demanded by restlessness or pain.

The nourishment was milk-porridge till the first alvine discharge was procured (by enema) on the seventh day, the beef-tea, and soon after some solid food. There was no tympanites at any time, and no tenderness, except for four or five days, over the site of the pedicle. The first suture was removed on the seventh day, the last on the fourteenth day after the operation.

The only complications after the retching was overcome were:—

1. The incision, which had united throughout by first intention, on the sixth day began to suppurate, and gradually reopened (by the 11th day) at two points, each half an inch long, *down to* the peritoneum, but *not through* it. It discharged from drach. ij. to drach. iij. per day until the twentiety day, when it had again perfectly healed. She was not allowed to sit up till then, though strong enough for several days before.

2. A dysenteric attack occurred on the thirteenth day, which was, how ever, overcome by the use of hydrarg. protochlorid. cum rheo.

After the twenty-first day the patient sat up all day; and one week thereafter left the city to visit her friends.

Remarks.—1. The first of the preceding cases was a very unfavorable one for ovariotomy. A great depression of the vital powers was shown from the fact that the œdema of the extremities was not removed after the first tapping. After the operation, also, a slough formed around each of the needles, and in contact with each ligature, used in closing the incision. Besides, she had had little appetite for several months, for which the gastric mucous membrane may account; and her age (40 to 45) is the most unfavorable of all.* On the contrary, the other patient was very fortunate in this respect (over 50 years), and also in most others.

2. But both cases illustrate the importance of including *the peritoneum* by the sutures (and needles) used to close the incision. Both incisions were opened by suppuration down to the peritoneum; but the matter in neither case entered the peritoneal cavity, as it must have done, had not the peritoneum been united during the suppuration in the incision. In the second instance the incision reopened without any apparent cause.

3. The first case also demonstrates the position I have assumed† respecting the effect of a ligature upon the pedicle, viz., that *no slough of the stump of the pedicle is thus produced*, and that the method of treating the pedicle adopted in these two cases promises the best results.—*American Journal of the Medical Sciences*, July, 1865.

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*See my statistics in this Journal, January number, 1866, p. 160.
†See my paper on Ovariotomy, Trans. of N.Y. Acad. of Med., vol. 3, part 3.

American Medical Association.

CONVENTION OF TEACHERS OF THE MEDICAL COLLEGES OF THE UNITED STATES.

In compliance with a call of a Committee appointed by the American Medical Association, at its last annual session, held in Baltimore, May 3d, 1866, delegates from most of the medical institutions of the country met on the 3d inst., at 10 o'clock, in the faculty room of the Medical College of Ohio.

Professor Davis, of Chicago, Chairman of the Committee, called the meeting to order, and, after stating its object, proposed, with a view to facilitate the perfection of a perfect organization, the appointment of a temporary Chairman and Secretary. This proposition being accepted, Professor A. Stille, of Philadelphia, was elected temporary Chairman, and Professor G. C. E. Weber, of Cleveland, Secretary.

Professors Davis, of Chicago; Danaldson, of Baltimore; and Blackman, of Chicago, were appointed a Committee on Credentials. The following named gentlemen were approved as delegates from their respective colleges:—

Professors A. Hammar, of Humboldt Medical College, St. Louis, Mo.; W. N. Byford, Chicago Medical College, Chicago; A. Stille, University of Pennsylvania, Philadelphia, Penn.; A. B. Palmer University of Michigan, Mich.; A. B. Palmer, Berkshire Medical College, Mass.; Alden March, Albany Medical College, N.Y.; A. J. Steele, Chicago Medical College, Chicago; N. S. Davis, Chicago Medical College, Chicago; Francis Carter, Starling Medical College, Ohio; James M. Holloway, University of Louisville, Ky.; N. R. Taylor, Medical Department of Iowa University, Iowa; J. C. Hughes, Medical Department of Iowa University, Iowa; G. C. E. Weber, Charity Hospital Medical College, Cleveland, Ohio; F. Donaldson, University of Maryland, Md.; J. N. McDowell, Missouri Medical College, Mo.; C. G. Comegys, Medical College of Ohio, Ohio; George C. Hackrum, Medical College of Ohio; E. B. Stevens, Miami Medical College, Ohio; George Mendenhall, Miami Medical College, Ohio; L. O. Gross, Jefferson Medical College, Penn.; B. L. Lawson, Cincinnati College of Medicine; —— Read, Cincinnati College of Medicine.

Professor Stille, of Philadelphia, was chosen permanent Chairman; and Professor Weber, of Cleveland, Secretary.

Professors Holloway, of Louisville; Davis, of Chicago; Donaldson, of Baltimore; Blackman, of Cincinnati; and March, of Albany, were appointed a committee to report on the order of the different subjects which were to occupy the attention of the Convention. After which the Convention adjoured to four o'clock, p.m.

In the afternoon session, this committee reported the following distinct propositions for the consideration of the Convention:--

"1. That every medical student applying for matriculation in a medical college shall be required to show, either by satisfactory certificates or by a direct examination by a committee of the faculty, that he possesseses a thorough knowledge of the common English branches of education, including the first series of mathematics and the natural sciences, and that the certificates presented or the results of the examinations thus required, be regularly filed as a part of the records of each medical college,

"2. That every medical student be required to study not only three full years, but also to attend three regular annual courses of medical college instruction before being admitted to an examination for the degree of Doctor of Medicine.

"3. That the *minimum* duration of a regular annual lecture term, or course of medical college instruction, shall be five calendar months.

"4. That every medical college shall embrace in its curriculum at least *thirteen* professorships, including substantially the following branches, namely:—Descriptive Anatomy, Physiology and Histology, Inorganic Chemistry, Materia Medica, Organic Chemistry and Toxicology, General Pathology and Public Hygiene, Surgical Anatomy and Operations of Surgery, Medical Jurisprudence, Practice of Medicine, Practice of Surgery, Obstetrics and Diseases of Women, Clinical Medicine and Clinical Surgery. That these several branches shall be divided into three groups or series, corresponding with the three years required for medical study. The first, or freshman series, shall embrace Descriptive Anatomy, Physiology and Histology, Inorganic Chemistry and Materia Medica. To these the attention of the student shall be mainly restricted during the first year of his studies, and on them he shall be thoroughly examined by the proper members of the faculty at the close of his first course of medical college instruction, and receive a certificate indicating the degree of his progress. The second, or junior series, shall embrace Organic Chemistry and Toxicology, General Pathology, Public Hygiene, Surgical Anatomy and Operations of Surgery and Medical Jurisprudence. To these the attention of the medical student shall be directed during the second year of his studies, and on them he shall be examined at the close of his second course of medical college instruction, the same as after the first. The third, or senior series, shall embrace Practical Medicine, Practical Surgery, Obstetrics and Diseases of Women, with Clinical Medicine and Clinical Surgery in hospital. These shall occupy the attention of the student during the third year of his medical studies, and at the close of the third course of his medical college attendance, he shall undergo a general examination in all the departments, as a prerequisite for the degree of Doctor of Medicine. The instruction in the three series of branches is to be given simultaneously, and to continue throughout the whole of each annual college term; each student attending the lectures on such branches as belong to his period of progress in study, in the same manner as the sophomore, junior and senior classes each pursue their respective studies simultaneously throughout the collegiate year, in all our literary colleges.

"5. That the practice of selling individual tickets by members of medical college faculties should be abolished, and, in place of it, each student should be charged a specified sum for each annual course of medical college instruction, the sum being the same for each of the three courses before graduating; and any student or practitioner who has attended three full courses in any one college, shall be entitled to attend any subsequent course or courses in that college gratuitously. The fees paid for each annual course of college instruction should be paid to the treasurer of the college, and subsequently distributed to each member of the faculty at such time and in such proportion as the trustees and faculty of each college shall determine,

"6. That inasmuch as the maintenance of an efficient medical college requires a large expenditure of money annually, and inasmuch as there is no reasonable hope of adequate endowment from the several State governments, the exaction of a just and reasonable annual lecture fee is a necessity with which all medical colleges should comply, and that $105 should be the minimum fee for each regular annual course of instruction in any medical college in the United States."

The first proposition was taken up and discussed by Professor Davis, Gross, Comegys, McDowell, Hammar, Taylor and Palmer, and with an amendment so as to strike out the words "natural sciences," and add "sufficient knowledge of Latin and Greek to understand the technical terms of the profession;" it was adopted.

The Convention then adjourned to meet at 9½ o'clock on the 4th instant,

SECOND DAY—MORNING SESSION.

The Convention was called to order at 9½ o'clock, a.m., by the Chairman, Professor Stille. The minutes of the preceding session were read and adopted, The Chair then announced that the next business in order was the discussion of Section 2 of the Report of the Committee on the Order of Business, which reads as follows:—

"That every medical student be required to study three full years, including three regular annual courses of medical college instruction, before being admitted to an examination for the degree of Doctor of Medicine."

Professor Gross, of Philadelphia, moved to amend so as to insert "four" after study, instead of "three."

Remarks were made by Professors Gross, Hammar, of St. Louis; Davis, of Chicago; Palmer, of Michigan; and McDowell of St. Louis.

The Convention then suspended the rules, for the purpose of allowing Professor Davis to introduce the following resolution:—

"*Resolved*,—That in all distinct propositions under the consideration of this Convention, no member shall speak more than once until all the other members have spoken who wish to speak." Adopted.

Professor F. Howard, of Washington City, moved to amend by inserting "not less than three years," instead of "three full years." Lost.

Professor Gross' amendment was then adopted.

On motion of Professor Gross, the entire section, as amended, was unanimously adopted.

Professor Hammar moved to take up for consideration Section 4 prior to Section 3. Lost.

Section 3 was read, viz.:—

"That the minimum duration of a regular annual lecture term or course of medical college instruction shall be five calendar months."

Professor Gross moved to amend by inserting "six" in place of "five calender months." Carried.

Section 3, as amended, was then adopted.

Section 4, being next in order, came up for discussion. Professor Gross moved to discuss the different parts of this section separately. First, that relating to the different branches recommended to be taught in the Schools. Second, the number of professorships. Third, the division of studies. Adopted.

Professor Hammar moved to add to the different branches of Natural Philosophy and Pathological Anatomy.

Professor Donaldson, of Baltimore, moved to act upon these propotions separately.

The vote on the addition of Natural Philosophy being taken, it was rejected.

The amendment adding Pathological Anatomy was carried.

Professor Byford, of Chicago, moved to amend by including diseases of children. Carried.

On motion, the Convention then adjourned to meet at 4 o'clock.

AFTERNOON SESSION.

The meeting having been called to order by the Chairman, the second part of Section 4 was called up for discussion.

Professor Gross moved to amend by inserting after the words "following branches," "to be taught by not less than nine Professors." Carried.

Remarks were made by Professors Gross, Palmer, Davis Hammar, Howard and Taylor.

The third part of Section 4, referred to the division of studies, was next considered.

Professor Davis moved to amend, by making that part read as follows:—

"That these several branches shall be divided into three groups or series, corresponding with the three courses of medical college instruction required.

"The first, or Freshman series, shall embrace Descriptive Anatomy and Practical Dissections, Physiology and Histology, Inorganic Chemistry and Materia Medica and Therapeutics.

"To these the attention of the student shall be mainly restricted his first course of medical college instruction, and in these he shall submit to a thorough examination by the proper members of the faculty, at its close, and receive a certificate indicating the degree of his progress.

"The second, or Junior series, shall embrace Organic Chemistry and Toxicology, General Pathology, Morbid Anatomy and Public Hygiene, Surgical Anatomy and Operations of Surgery, and Medical Jurisprudence. To these the attention of the medical student shall be directed during his second course of medical college instruction, and in them he shall be examined at the close of his second course in the same manner as after the first.

"The third, or Senior series, shall embrace Practical Medicine, Practical Surgery, Obstetrics and diseases peculiar to women and children; with Clinical Medicine and Clinical Surgery in hospital. These shall occupy the attention of the student during his third course of college instruction, and at its close he shall be eligible to a general examination on all the branches as a prerequisite for the Degree of Doctor of Medicine. The instruction in the three series of branches is to be given simultaneously, and to continue throughout the whole of each annual college term; each student attending the lectures on such branches as belong to his period of progress in study, in the same manner as the Sophomore, Junior and Senior classes, each pursue their respective studies simultaneously throughout the collegiate year, in all our literary colleges."

After a protracted debate, in which Professors Gross, Palmer, Blackman, Hammar, Davis and Taylor participated, the motion of Professor Davis prevailed.

Professor Davis then moved the adoption of the entire section as amended. Carried.

Section 5 was then taken up, and, upon motion of Professor Palmer, laid on the table.

Section 6, being in order, was read, but on motion of Professor Gross was also laid on the table until Monday morning, 6th inst.

On motion of Professor Davis, the Convention then adjourned to meet at 10, a.m., on Monday morning.

THIRD DAY—MORNING SESSION.

The meeting was called to order by Professor Stille at 10 o'clock, a.m.

The minutes of the previous session were read and approved.

The Committee on Credentials announced Dr. T. M. Logan, of Sacramento, California, as an authorized delegate from the faculty of the Toland Medical College of San Francisco.

Professor Gross moved to reconsider parts of section 4, relating to the branches to be taught in medical colleges.

Professor Hammar moved to suspend the rules for that purpose. Carried.

Professor Gross moved to amend part first, section 4, by inserting the words "Medical Ethics," after the words "Medical Jurisprudence."

Professor Palmer moved the adoption of the amendment. Carried.

Professor Comegys moved the reconsideration of section one.

After suspension of the rules this motion was adopted.

Professor Comegys moved to amend section 1, by inserting "Elements of Natural Sciences" after the words mathematics. Carried.

Professor Hammar moved the adopted of the whole section as amended. Carried.

Section six was then considered.

On motion of Professor Donaldson it was laid on the table.

Professor Palmer then introduced the following resolution:—

"*Resolved*,—That every medical college should immediately adopt some effectual method of ascertaining the actual attendance of students upon its lectures and other exercises, and, at the close of each session of the attedance of the student, a certificate, specifying the time and the courses of instruction actually attended, should be given; and such certificate only should be received by other colleges as evidence of such attendance."

The resolution was adopted.

Professor Davis moved the adoption of all the sections as amended. Carried.

Prof. Gross moved to transmit a copy of these sections as adopted by this Convention, certified to by its officers, to the American Medical Association, at its next session.

Professor Davis then introduced the following resolution:—

"*Resolved*,—That a committee of five be appointed by the President, whose duty it shall be to present the several propositions adopted by the Convention, to the trustees and faculties of all the medical colleges in this country, and solicit their definite action thereon, with a view to the early and simultaneous practical adoption of the same throughout the whole country. And that the same committee be authorized to call another convention whenever deemed advisable."

The Chair appointhd the following gentlemen that committee:—

Prof. Davis, of Chicago; Donaldson, of Baltimore; Gross, of Philadelphia; March, of Albany; Blackman of Cincinnati.

The Chairman then introduced Dr. Vattier, President of the Cincinnati Academy of Medicine, who invited the members of the Convention to be present at the opening of the Academy in the evening.

Prof. March moved to accept the invitation. Carried.

On motion of Prof. Davis a vote of thanks was returned to the Chairman and Secretary of the Convention for the efficiency with which they have discharged their duties, and to the Faculty of the Ohio Medical College for the use of their hall.

The President returned his thanks to the members of the Convention in a neat and appropriate speech.

Prof. Stevens moved that a formal written thesis on some professional topic shall be regarded as one of the indispensable requirements for the doctorate.

Remarks were made by Profs. Comegys, Stevens and Donaldson.

Professor Davis then rose simply to suggest whether there was not some danger of entering upon the consideration of propositions involving details that might unnecessarily complicate the great leading object for which we have been laboring. Whether the time-honored and universal custom of requiring the medical students to write a thesis could be insisted on or not, would have but little bearing on the great principles involved in the revision of our medical education. If the standard of preliminary education which we have here adopted should be carried into effect, it would remove one of the objects for which the writing of a thesis was originally demanded. Yet, he said, it was desirable to retain the practice, if for no other purpose than to encourage every student in the habit of expressing his thoughts on paper. But the great and all-important object of this convention was simply to place the system of medical education in this country upon sound educational principles, by erecting a standard of preparatory education, by increasing the period of study, by adding to the college courses, and by determining a rational order of study. This we have now done, so far as this convention is concerned, by the harmonious adoption of the five propositions already passed upon. And he earnestly suggested whether we had not better stop here, and devote the remainder of our time to the work of devising the most efficient means to secure the adoption and simultaneous practical execution of the provisions already agreed upon by all the colleges of our country, and leave all minor matters of detail to be determined as time and circumstances should indicate in the future.

Thereupon, on motion of Professor Hammar, the Convention adjourned, subject to call of the commtttee.

[We insert the following circular. We shall be pleased to receive and publish reports of such cases as well as forward them to the Surgeon General. We hope the Texas surgeons will respond] :—

SURGEON-GENERAL'S OFFICE,
WASHINGTON CITY, APRIL 25, 1867.

DEAR GENERAL:

In the course of your army experience, did you witness any amputation at the hip-joint, or did you become cognizant of the particulars of any case not enumerated with those on page 50 of Circular No. 6, Surgeon General s Office, 1865? I shall be greatly indebted to you for an answer to these inquiries, and still more for an expression of your opinion on the value of this operation in military surgery. I shall also esteem it a particular favor if you will send me any information you may be able to obtain from surgeons who have served in the late Confederate Army on this subject.

I am, General, very respectfully,

Your obedient servant,

(By order of the Surgeon General.) GEORGE A. OTIS,

Assistant Surgeon and Brevet Major, U.S. Army,

Curator, Army Medical Museum.

Brevet Brigadier-General T. A. MCPARLIN,
Surgeon U.S. Army.
New Orleans, La.

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HEADQUARTERS DISTRICT OF TEXAS,
OFFICE OF CHIEF MEDICAL OFFICER,
Galveston, Texas, May 17. 1866.

I shall be happy to receive any communication, concerning the above matter, which will be promptly forwarded to the Surgeon-General.

GEORGE TAYLOR,

Brevet Lieut.-Colonel and Surgeon, U.S.A.,

Chief Medical Officer.

To Our Patrons.

We are thankful to our friends for our list of subscribers, and, as we have now caught up with our time of publication, and put our JOURNAL beyond per adventure of failure, we ask all to send the needful, if *convenient*, as we have a heavy bill to pay in the present month for publication. We have given you a great deal of reading matter; our pages are of the usual size, but our type is small, and of matter our JOURNAL will compare with any. Some complain that there is not sufficient variety in the matter; two Nos. are published together; too many typographical errors; badly edited, &c., &c. All we have to say, we see all our faults and will remedy them so far as we can, but, up to the psesent, we have done the best we could under the circumstances.

We have moved to our new office, opposite the Post-office, 20th st., and are now engaged in correcting our books, and if any friend feel agrieved in not having their letters answered they will please excuse us as we have been building both at the hospital and our present office and had no regular office for the last six months (since we were burned out), our journals and books have been scattered, and letters lost, but we are now at home and better fixed than ever. Will be pleased to see our friends from the country.

Hernia,—Radical Cure by Subcutaneous Suture.

Josiah Overton, aged 24 years; an Englishman; seaman on the schr. Wide World; was admitted into City Hospital May 8th for treatment of reducible oblique inguinal hernia of the right side. He had been treated for it with Wurtzer's instruments in Calcutta about nine months before, but had returned several days before admission as bad as ever. There were scores of the needle at two points but no indentation about the opening of the internal or external ring, but there was a thickening around the score in the scrotum. Prof. Dowell determined to operate after his own plan, with the consent of the patient. He performed the operation on the 10th of May, assisted by Drs. Hanna, Barnet, and myself.

OPERATION.

The operation was performed in the following manner:—The double spear-pointed curved needle was threaded with silver wire at one end, and the threaded end was taken in the right hand, and a portion of the skin and cellular tissue pinched up with the left hand fingers over the rupture, and the needle inserted from left to right, and then pulled through until the threaded point reached the body of the tendons on the right side, when the sac was invaginated and the threaded point pushed through the side of the right tendon and passed across the opening to the left tendon and out on the left side; then the needle was drawn until the unthreaded point passed the external side of tendons and then reversed and pushed through the skin beyond where the needle was first inserted. A second ligature was applied in the same manner and both tied over a piece of cork, drawing the edges of the two tendons together, as described in the December No. of GALVESTON MEDICAL JOURNAL and in the *New York Medical Record*, of July, 1866.

May 10.—Evinced peritoneal symptoms.

May 14.—Pain more contracted; is entirely confined to neighborhood of operation.

May 15.—Sutures withdrawn and cold fomentations applied.

May 20.—Pus has been forming and oozing through the apertures since the withdrawal of the sutures.

May 24,—Diminished excretion, gradual reduction of swelling, and subsidence of pain since 20th.

May 28.—Patient is rapidly improving; is cheerful and easy; says he can cough and sneeze without the return of his complaint, which he could not do before the operation.

June 3.—Is walking about quite well; says the operation and treatment was not so bad or so painful as the former; says he is all right now.

CARY WILKINSON.

House Surgeon.

The Question of the Inoculability of Tuberculous Matter

Receives attention at the hands of other observers since Villemin startled the medical world by an affirmative answer, as the result of his experiments (*Union Medicale*, 1865). Two other French investigators, Herard and Cornil, report (*Gaz. Med.*, 1860, No. 15,—in *Prager Vierteljahrschrift*, 1866, IV.) that they succeeded in inoculating two rabbits with grey tubercle of the peritoneum and pleura, while the attempted infection by cheesy tuberculous matter failed. The two rabbits used in the former experiment, when examined two months after the operation, showed distinct, but not far progressed, tuberculosis of the lungs. The experimenters conclude that it is necessary to make a distinction between the specific tuberculous granules and the caseous products of inflammation, the result of inoculation of the one being positive, of the other negative.

A different answer to the question is given by Prof. A. Vogel, of Dorpat (*D. Archiv. f. klin, Med. II.*, 364, 1866), who inoculated a crow, a cat, and a five months' colt (rabbits being rare and difficult to raise in in Dorpat, on account of the climate). Several grey and cheesy tubercles were introduced into the subcutaneous tissue of the neck, exactly in accordance with the directions of Villemin. The wound in each case healed very slowly, with a thickening of the skin, etc. Thirteen weeks after the operation the crow and cat were examined; in the cat absolutely *no* lesion of internal organs was found, microscopic or macroscopic. The place of inoculation presented the appearance of an impure wound, such as a dissecting room wound. In the crow likewise no traces of tubercle was found, either in the lungs or in the brain and meninges. On the peritoneal coat of the intestines, however, V. discovered "twenty or thirty white granules of the size of a millet seed, which, at the first inspection, might very well be mistaken for fresh miliary tubercles," and also five white granules a little larger than the others; the former "consisted solely of fat drops of unequal size after the manner of milk globules, encased in an oval or circular connective-tissue-capsule originatig in the peritoneum; the latter, magnified eighty times, were found to contain completely developed moving *worms* (nematoids) three-fourths of an mm. long, determined to be Spiroptera Anthuris. The author mentions that on another occasion, he found bodies very similar to the first mentioned granules on the pulmonary pleura and on the peritoneal coat of the liver of a rabbit; he considered them inceptive tubercles, but found by microscopic examination, not tubercle, but *helminthic eggs*. The colt, which was afterwards used for other experiments and died of septicæmia, presented no trace of tubercle in any organ. V. thus closes his notice:—

My three inoculations yielded, contrary to those of Villemin, *negative results*. Tuberculosis *cannot be communicated* from a tuberculous corpse to the horse, the cat, or the crow. * * * * * * * * * * * * * I therefore permit myself, until further developments, to doubt the validity of Villemin's experiments, and would make the request to all physiological institutes where more rabbits are kept, to investigate more thoroughly by further experiments and exact dissections this—clinically—highly important question of the inoculability of tuberculosis from the dead subject upon the living organism. At all events, a few white granules which are found here and there in almost every subject, must not at once be regarded as tubercles, but must especially be distinguished by exact microscopic examination from small enthelmintic depots, which are so frequent in rabbits.

Books, Pamphlets and Journals Received.

JOUNNALS REGULARLY RECEIVED:

Atlanta Medical and Surgical Journal.
Boston Medical and Surgical Journal.
Buffalo Medical and Surgical Journal.
Braithwaite's Retrospect.
Detroit Review.
Medical and Surgical Reporter.
Medical and Surgical Monthly, Memphis.
Medical News and Library.
Medical Reporter.
New York Medical Journal.
Richmond Medical Journal.
Southern Medical and Surgical Journal.
Southern Journal of the Medical Sciences.
St. Louis Medical and Surgical Journal.
The Medical Record, New York.
The Savannah Journal of Medicine.
The Medical Reporter, St. Louis.
The Dental Cosmos.
The American Journal, new series.
University Jourhal of Medine and Surgery.
Zeitschrift fur Practische. Heilkunde.

METEOROLOGICAL TABLE FOR JANUARY, 1865, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE.	1-3P.M.	SUN SET.	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
	1	39..45..	39....35	30.40	0....E1-2......	s2-4...s1-3...1-2	29	65	55	50	0...... ci.......0	0......0........ccs1			
Mon..	2	19..18..	..13..14	30.16	0....s1-3........	s2-5.. s1-3...s1-3	41	71	65	59	cc5........0........	cc9......cc5.....cc5			
Tues.	3	12..18..	..16..19	30.15	0....s1-3.........	s2-5...s1-3...s1-3	51	76	64	64	........ci2.........	dcicic7..cccs5......			
Wed..	4	20..23	82..82	30.18	NE1-2....E1-3...	SE2-4...s1-2....0	49	65	57	57	dcicsc7....ccsci5...	cuci6....ci8.... ...			
Thurs	5	93..99..	..07..08	29.89	s0-1....s1.2......	s1-2...s1-2...s0-1	60	70	68	66	ncc10... n10.... ..	ccs1....cccu5.......			
Fri...	6	06..14..	..06..05	30.10	NW1-3....w2-5..	w2-4...w2-4...0	42	64	55	54	0.........0.........	....cccu7.....cucc2		..shr	
Sat...	7	06..15..	93.85.84	30.10	N0-1....s1-2.....	s2-3...s2-4.. s1-3	31	66	54	50	ci.........ci1	cucccci5........cucc8	shr..............	....shr.....	....R......
	8	96..99..	57.58.64	29.90	s0-1....SE2-4..	s2-5...s2-5...s2-5	54	59	58	57	n10.....ncc10.......	cuci8.cudcici..8cc10		ths N & S..	
Mon..	9	52.59.62	..13..18	29.58	0....s1-3.........	N0-1. w1-2..w2-4	59	65	55	59	ncc10....cccifc3....	cucc5.cidcistr7cistr3		ths S.......	
Tues.	10	36....10	40.40.40	30 02	0....s2-4.........	.....s1-3....s1-3	39	63	52	51	cucc3....cucc7.....	cucc4..cucc3..cistr1			
Wed..	11	36..44..	45.39.37	30.40	0....s2-5.........	s3-5..s2-5...s2-4	34	64	53	50	cicustr5....cuci7....	....cucc4 .....cistr7	L S E.......		
Thurs	12	42..48..	..20..19	30.43	NE0-1.....NW2-3	s2-5..s2-4...s2-5	32	62	52	49	strci2....cuci7......	cucc5...cucc5....ci1	L S E.......		
Fri...	13	24..27..	26....24	30.23	NE1-3....E2-4...	E1-3..s1-3...s1-2	45	61	59	55	ccs3....cucc5.......	cucc8..cucc8 ..cuci8			
Sat...	14	24....30	..06..04	30.27	E1-2....SE1-3..	E1-4.NE1-3..N0-1	51	54	51	52	cccis5....cicccu4....	cudci..8cicu7..cicu3	shr shrs SE .	ths SW. ths	
	15	10..16..	..10..09	30.10	0....s2-5.........	NE1-4..E2-4....0	46	50	47	48	ccs2....cu5........	cu4..cu3..cccucistr5	L E....shr E	R shrs. W..	
Mon..	16	08..16..	05....96	30.12	0....s2-5....s2-4	SE2-4....... s1-3	44	63	54	54	cucc2....cucc5.....	cidci7.cidci7.dcistr9			
Tues.	17	03..07..	..97..00	30.01	0....s2-4	SE2-4.SE2-4.SE1-3	38	58	55	50	cu1....cu6.........	cc9..cccustr9..ccn10			
Wed..	18	95..03..	..97..96	29.99	0....NE1-3......	SE1-3..s1-3..s1-2	35	75	58	56	cu2....cucc7........	.....ccci3........ci2	.....R.....		R........
Thurs	19	05..06..	75.67.66	30.01	0....s1-3	s1-2..s2-4...s1-2	51	61	58	57	ci2....cuci2	cucc8...cuci4...ccs2			
Fri...	20	81..82..	..65..70	29.74	0....E1-2	NE1-4.NE1-4.E1-2	46	60	58	55	cicu2.......cidcistr4	cccu3..ccci2.. ccstr2		ths	
Sat...	21	65....71	..90..93	29.68	0....E1-3........	E1-3..E1-3.. E1-2	56	80	69	68	cc10....ncc10.......	cicccu3cicu3cccustr4			
	22	88..96..	20.17.20	29.92	0....SE2-4......	NE1-3..E1-2.E1-3	38	40	37	38	cistr2....cicc3......	cucc7.. cucc....3cu1			
Mon..	23	15..22..	30.27.25	30.18	0....SE3 4......	..E1-3...... E1-2	25	42	38	53	cistr2....cc2........	cucc5...cucc5....cc1	fog, spr.....		
Tues.	24	22..34..	29.28.27	30.30	0....s1-2	w2-5..s2-4. SE1-2	23	49	40	37	cicc2....ci2.........	cucc10.cicu7..ciccs8	......shr : E	spr.	
Wed..	25	24..34..	..32..27	30.29	0....E1-3........	SE2-4.SE2-4.SE1-3	29	43	41	38	ccs2....dcici2.......	cc9....cc9. cccistr7		ths N......	
Thurs	26	30....44	..12..08	30.35	E1-2.... E2-4....	s2-4..s2-4..SE1-4	28	52	37	39	... cucc8...	cccu5...cuci5 ...cc2			
Fri...	27	15. 20..	..19..23	30.14	0....E1-3........	s2-4...s2-5...s1-3	40	45	40	42	cu1....cucc6	cccistr1....cc2.....	R...shr.....		
Sat...	28	12..26..	29.27.28	30.19	N0-1....E1-3....	s2-5..s2-5...s1-3	36	44	43	41	cccucistr4.....cucc4	cc10....ccn10..ccs10			
	29	27....34	29.25.26	30.30	0....E1-3....s2-4	s2-4. s2-4...s1-2	35	61	49	48	ccci8....cc9........	ci6..cicc8....ccstr10			
Mon..	30	24..26..	..26..27	30.27	E1-3....SE1-4....	SE1-3 SE1-3.SE1-3	46	49	49	48	cc10....cccu7.......	n10...ccc10... ncc10			
Tues.	31	26..30..	30....27	30.28	s3-4....s1-2,....	SE1-4.SE2-4.SE2-4	50	61	60	57	cccil....cc1........	ncc10. ncc10..ncc10			
					Force of wind	as 2.50 is to 10.					Amount of clouds	as 6.23 is to 10.			

Max. range 30.'48; min. 29.'53. 30.'11,87 mean for the mouth. 51°10 mean for the month. Max. range 80°10; min. 23°.

GENERAL REMARKS.—5th—Considerable rain fallen. 6th—Norther early this morning. 10th—Wind high from W to NW all night. 12th—Cold chilling air. 21st—9¾ p.m., norther came in. 22d—Light misty rain till 4 p.m.,—sleeting at 9 p.m. 23d—Freezing in the shade—wind N3-6 all night. 24th—Thawing but very little in the shade.

METEOROLOGICAL TABLE FOR MARCH, 1865, AT HOUSTON.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SNU . RISE	1-3 MP	SUN . SET .	MEAN. THER.	CLOUDS.		RAINS, FOGS, &C.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P. M.	A. M.	P. M.	NIGHT.
Wed..	1	93. 94.	..84..85	.	0....s2-5	s3-5...s2-5..s2-4	57	66	70	64	ccs3....cc6	cccu6....cucc7. cc3	mist...	R,	
Thurs	2	90..93..	87.83.81	29.89	SE1-2....s2-5....	s2-5...s2-4..s2-4	67	72	70	70	ccci4....cccu10	cccu10 ccdci9 dcicc10	spr. .R		
Fri...	3	81..82..	78.81.88	29.87	s1-3....s2-4,	s1-3...s2-4..s2-4	67	75	60	67	cc9....ncc10	ncc10..cccu8..cucc3	..		
Sat...	4	16... 23	..14..13	29.83	s1-3....s2-4	s2-5...s3-5..s2-4	47	69	60	59	ccn9....ccu10	cc10....cc10.....cc9			
	5	12..16..	14.13.12	30.18	s1-3....s2-3	s2-5...s2-5..s2-4	46	67	58	57	n10....cc7	cucc9..cucc8....n10			
Mon..	6	07..07..	05.01.98	30.14	s1-2N1-2 w1-2.sw	w2-4..w2-5.N2-5	50	74	65	63	ccdci6 ...cccu5	cc2.........0........0			
Tues.	7	91..95..	93837980	30.04	N2-4....N2-5	NW2-4. NW2-4..0	62	76	69	67	0.......0	0..........0......ci1		spr.spr.Rth	ths
Wed..	8	81..84..	79.75.74	29.87	0....s1-3	s1-3N1-3N1-3.NW	64	75	70	70	0 ...ci1	ci2.......ci1.......ci1			
Thurs	9	85..00..	04980207	29.79	0....w1-3	s1-2...s1-3..s1-3	57	44	43	41	cistr3....cicc3	cidci3....ci3.....ci4			
Fri...	10	17..20..	24.16.14	29.91	0....sw1-2	s1-3...s1-3..s1-3	28	60	56	48	dciccs6....ccci8	ccdci8.. dcici7...cc8	ice		
Sat,..	11	19....30	..27..28	30.1ç	0....w1-3	SE1-3.SE2-4..s1-2	37	70	59	55	cc3....cc3	cccu3.. cucc2....cc1	frost		
	12	21....26	..17..16	30.26	0....s1-3	s1-3...s2-4..s1-3	54	70	65	63	....cccu6	cucc8....cucc2.. cc1			
Mon..	13	05..08..	04.99.95	30.24	0....SE13	SE2-4..s2-5..s1-3	60	69	66	65	cc7....cc4	cucc8.... cucc2....0		spr..R th..	R....spr
Tues.	14	85..86..	84.78.80	30.07	SE1-2....s2-4	s2-4...s2-4..s1-3	65	77	70	71	cc6....cucc7	cucc5....ecci3...cc1	........spr.		
Wed..	15	75..85..	86.87.97	29.87	0....s1-3	s1-3...s1-3..s1-2	68	67	60	66	ccs5....cucc7	cucc5..cucc4 .custr2	spr	spr	
Thurs	16	20..28..	25.22.20	29.88	0....s1-3	s2-4...s1-3. s1-3	39	68	66	58	... ccci2	cc5......cc2.... cu1			
Fri...	17	19..24..	22.19.18	30.92	0....s1-3	s2-4...s2-4..s1-3	46	74	67	62	fcc10....ci1	cucc6.....cc2......0			
Sat...	18	19..25..	23.18.19	30.94	0....s2-4	s2.4...s2-4..s1-3	61	76	66	68	ci2....cccicu8	cuci6.. .cicc4... ci2			
	19	13..14..	09.05.00	30.94	0....s1-3	SE2-4.SE2-4. s1-3	61	73	67	67	custr2....cu5	dcicu9dcicucc8cistr4		spr R——	R thL....ths
Mon..	20	80..86..	83.77.75	30.80	0....s1-3	sw2-4w1-3NC-1.s	67	78	67	73	fc7....ccci4	cucc7...cucc4....ci1	ths.R		L n
Tues.	21	87..98..	04.02.06	29.22	0....w1-3...s2-4	s2-4w2-4s2-4 s1-4	62	74	73	68	custr2....cc9....ci1	cccu6....cucc5...ci1			
Wed.,	22	15..20..	17.16.17	29.28	NE0.1....s2-4	s1-2...s2-4..s2-4	54	73	67	63	cc9....cc5	ccccicu5cudci8cidci4			
Thurs	23	15..19..	17.13.09	30.24	0....E1-3	s2-4...s2-4..s1-3	58	68	69	63	cc8....ccci5	cicc2....cicc2....ci5			
Fri...	24	06..08..	06.00.01	30.01	N1-3....N2-5	E2-4.....E2-4...0	54	80	61	68	ccdcistr7....cc10	cidcicc5..cidci7..ci8			
Sat...	25	95..01..	97.94.95	30.99	0....NE1-3	N1-4....N1-4..0	53	70	63	61	ci3....cccuci3	dcicc8.dcicc7..cidci4		R——	R. .R.
	26	94....99	..93..94	29.86	....SE2-4E1-3	SE1-4.SE2-4.SE1-3	60	65	72	63	cicc5 ...ccci5	ccci5...cicc8...cicc5	R...spr...R	spr R	ths R
Mon.,	27	80.95.96	..89..90	29.12	NE1-2	SE2-5.w3-6.NE1-2	56	78	67	68	cccc7....cucc9	cidcicc7 cl4.dcicistr7			
Tues.	28	90..92..	84.80.79	29.85	NE1-3	s1-3....s1-2	57	70	59	65	cccі9....cc10	ccci6.....cc8....cc9			.........R L
Wed.,	29	70..78..	82.86.94	29.01	s0-1....31-2	SE1-4....s2-5	67	65	64	65	n10....n10	ccci5....ccci2. .cc4	shr.R		
Thurs	30	05..08..	06.03.05	29.61	SE1 3....s2-4	NW3-5.N2-4.w1-3	46	78	69	60	0....... ci1	0.........0..........0			
Fri...	31	12..18..	17.15.12	30.86	n10....ncc10	s1-2. sw1-2..s0-1	46	70	64	64	0.........cicc1	ci1....ci5 . .dcici9			
					Force of wind	as 2.78 is to 10.					Amount of clouds	as 6.23 is to 10.			

Max. range 30.'30; min. 29.'70. 63.'29. mean ; max 80°; min.28°

General Remarks.—4th—N wind last night. 8th—Norther came in strong. 21st—5 a.m., norther light.

METEOROLOGICAL TABLE FOR FEBRUARY, 1865, AT Houston.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE	1-3P M	SUN SET	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Wed..	1	10.09.14	07.04.00	30.07	w1-3...s0-1....	s2-4.se2-4..se1-3	58	62	60	60	ci1..ci3...ccstr5....	cistr2....ci2........	R fog R....	— — —	R— — —
Thurs	2	85..87..	84.80.82	29.83	0....s1-2........	w1-4..s2-4..s1-2	60	68	67	65	ci2...ci3...dcis3....	ccstr4....ci2........	fog R......	R....spr...	
Fri...	3	92..97..	..94..95	29.95	0....sw1-2.....	sw2-4..s1-4.s1-2	63	82	[illegible]	73	ci1..ci2...ccstr4....	cis1....ci1.........	fog.........		
Sat...	4	98..04..	00....96	30.00	....s1-3........s	w1-3.s2-4.sw1-32	63	70	67	67	cc1...cc2....cc1....	dcis7....ci2........	R..........	spr.spr..spr	L
	5	90..95..	92....90	29.92	w1-3....s1-4....	s2-4.se1-3..se1-2	55	53	47	52	0..........0..........0	0.........0..........	spr.........	....R..spr.	....R — —
Mon .	6	96.90.98	94.96.90	29.94	se1-2....s2-4...	s2-4w2-4n2-5e2-2	37	33	38	38	....0....0..........	str.........0........	spr. R....	R — — —	
Tues.	7	97..06..	..99..06	30.02	se1-3..s2-4..n3-5	n1-2..e1-2..n1-4	34	61	53	49	....0....0..........	..........0..........	frost.......		
Wed..	8	16..25..	22.16.17	30.20	0....s2-4.......	se2-4.e-2-4.se1-3	31	58	51	47	ci1....cicc2.....ccs2	0.........0..........	frost.......		
Thurs	9	27..37..	..90..32	30.32	0..w2-5....w1-3	se2-4..se1-3....	33	65	57	51	ccci7.....cc7.....cc8	ccccci5....cc4.......	frost.......		
Fri ..	10	27..28..	..20..18	30.23	0....s2-4.......	se1-3.se1-3. s2-3	34	71	64	56	0.........0..........0	ccs1.........0.......	frost.......		
Sat ..	11	13..17..	..09..12	30.18	n3-5..se2-4. s2-4	se1-3.se1-3.se1-3	43	76	65	61	cncc7..........dcici3	cc8....ccci7.........			
	12	12..15..	13.07.06	30.11	0.....s1-2.......	s2-4...s1-2..s1-4	51	71	65	65	cc3..............ccs2	0....ci1.............	fog.........		
Mon .	13	98..99..	90.84.75	29.87	0....se1-2......	s1-3.se1-3..se1-5	57	61	58	59	dcicccci7..ccdci3.cc8	ci2....0.............	R ths.......	R— R— —	
Tues.	14	68....74	..65..69	29.69	0....se1-3......	s2-4..s1-3.nw1-3	53	72	65	62	cc10....ccu10....cc8	ccfc6....cc10........	fog shr th..		
Wed .	15	78 86..	83.79.78	29.82	0......s1-4.....	s1-4e2-5s1-2se1 3	46	72	67	62	cicustr5.dcici.5ccci2	dcis7....ccci7.......			
Thurs	16	75..81..	78.73.74	29.77	0......s1-3......	se1-3.se1-3.e1-2	45	80	70	65	ci3....cicc2...ciccs4	strci3....ci4........			
Fri...	17	89..96..	94.93.95	29.93	0......s1-3......	w1-3.se1 3.se2-4	61	80	72	71	ccci4...cicc6...ccci8	cccis6....dcicis.....			
Sat...	18	94..02..	00.95.96	29.98	0.....w1-3......	s1-3...s1-3..s1-3	45	75	65	62	dcin10.........ccci5	n10....n10...........			
	19	91..94..	..87..88	29.90	0......s1-3......	s1-2...s1-3..s1-3	58	66	59	61	0.........0.......ci2	0.........0..........	fog..light..		
Mon .	20	87..90	88.82.83	29.86	0....ne1-3.......	e1-3ne1-2se1-2.e	58	67	63	63	ccci9.....cc9.....cc9	str1....cicc2........		....spr.....	
Tues.	21	77..82..	..76..80	29.79	0....se1-3......	se1-3.e1-3.sw1-3	63	70	70	67	cccu8.....cc3..dcici4	cc3....ci1...........	R ..R———		R— — —R
Wed .	22	89..96..	93.87.93	29.93	0......s1-3......	s2-4..s2-4...s1-0	58	64	64	62	cc2......cc1........0	0....cc1.............	fog R.	fog.........	Rths RthL.
Thurs	23	90.94.96	..93..92	29.93	0......s2-4......	w1-2..s2-4..s1-4	61	64	62	62	....cucc5.......strci1	0....cucc5...........	Rth — — —	....fog....	Rths R.....
Fri ..	24	80.82.78	73.63.53	29.67	0......e0-3......	w1-3.n1-2..se2-3	54	60	61	58	ccci3...cuci3...ccci3	....fc10.....ci2....	spr Rth ——	misting....	R — — —L
Sat...	25	73..80.	85.85.90	29.81	e0-1..e1-3......	s1-3...s2-4...2-4	49	70	65	61	cncccci6...ccci3...cc2	ccci2....fc9.........			
	26	07..15..	..06..07	30.11	e0-1....e1-3....	s1-2.sw1-2.se1-4	45	65	63	58	cccu8..cucc6...cicc6	ci1....cucc3.........			
Mon .	27	04. 08..	..05..08	30 06	e0-1....se2-4...	se1-2.se1-3.se1-3	52	50	57	56	cccu8....cccu7...cc4	ccccicu4....cccu9...			
Tues.	28	08..10..	08.03.02	30.06	0.......se1-3. ..	se1-3.se1-3.se1-0	48	61	59	56	cc10..cuci7....ccn10	fccc6....cc9.........		....spr....	
					Force of wind	as 2.53 is to 10.					Amount of clouds	as 6.04 fs to 10.			

Max. range 30.'37; min. 29'58; 29.'96.97 mean for the month. 59°68 mean for the month. Max. range 82°; min. 33°

General Remarks.—4th—A misty rain nearly all the p.m. 6th—9 a.m., rain and some sleet—snow at Shreveport, La. 15th—W wind acts as a norther. 18th—Upper current from N to S. 21st—Mist and rain. 22d—Misting morning and evening. 23d—Misting and foggy all day—some rain. 25th—9 p.m., a northwester 4-6 came in.

METEOROLOGICAL TABLE FOR DECEMBER, 1864, AT HOUSTON.

TIME.		BAROMETER A. M.	BAROMETER P.M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN. RISE	1-3P M	SUN. SET.	MEAN THSR.	CLOUDS, A.M.	CLOUDS, P. M.	RAIN, FOGS, &C. A.M.	RAIN, FOGS, &C. P.M.	RAIN, FOGS, &C. NIGHT.
Thurs	1	04..06..	96.94.98	29.99	0....s1-3	s2-5..2-4..s1-3	64	81	71	72	cicc7....ccci7	cucc5...cicu3....ci2	fog R	spr	L
Fri...	2	93..96..	90....92	29.93	0....sw2-4	s2-4..s2-4..s2-4	68	82	72	76	ci2......cu5	cu4.....cu5....cccil			
Sat...	3	07....14	..10..12	30.11	0....sw2-4	s1 3...s2-4..s1-3	54	71	61	62	ci1......cccuci6	cccu4.........ci1			
	4	12..18..	..97..97	30.05	0....s2-4	s2-4..sw2-4..s1-3	40	72	65	59	cc2......cucc5	cc8......cc2......0			
Mon .	5	80..84..	..74..93	29.78	NE0-1..NE1-3	SE1-3W3-5s1-2s12	50	75	68	64	cc2......cuccci8	cuci7.dcicu8..dcicc6			
Tues.	6	79..83..	75....74	29.79	0	W1-3..E1-3..E1-0	65	80	72	72	cccu5....ncc10	dcicc8..cicc3...cistr			
Wed .	7	78..85..	89.93.98	29.88	0....E1-3	s1-3. E2-5.NE1-3	68	72	51	64	cicc6.....cicc4	cccu3..cucc3..cucc4			
Thurs	8	07..15..	10....12	30.11	0....E2-4	s1-3..SE1-2..s1-2	45	50	48	47	ci1......ccci7	cuccci5.....cudcici8			R
Fri ..	9	10..16..	07....06	30.11	0....s1-3	s1-3..SE1-3..E1-2	38	51	50	46	cuci2....cucc7	cucc6.cucc7. cucstr2			
Sat...	10	97..02..	..95..97	29.98	0....s2-4	SE1-3.SE1-3.SE1-3	39	49	49	46	ciccu3...cuci5	cccu9....cccucu9...			
	11	35..45..	..40..44	30.40	0....s1-3	SE1-3.SE2-5..s1-2	30	45	40	38	cccustr8.cccu7	cccu8..dcin10. dci10	ice		
Mon .	12	37..40..	36.27.25	30.32	0....s1-4	SE2-4..s2-4..s1-3	24	51	44	39	cicu3....cucc5	cuci7...cuci6....ci3	ice		
Tues.	13	04..08..	03.98.96	30.02	0....s1-4	s2-4...s2-4.. s1-3	49	75	66	63	cuci3....cuuc8	cuci5..cicu5..dcicc6	spr.		
Wed..	14	97..05..	03.99.00	30.01	0....s1-4	s1-3...s3-4...s2-4	67	82	75	75	ci2....cucc6	cuci8....cicu3...ci2	fog		
Thurs	15	97..04..	..96..94	29.99	0....s1-4	s2-4...s1-3...s1-3	66	76	69	70	cistr3....cucc7	cuccstr7.......cistr3	spr	spr..shrs	shrs
Fri ..	16	95..02..	94.94.95	29.98	0....s2-4	....s2-4.....s1-3	69	76	69	71	cicu2....cucc5	ccn10....ccn15	R...R	R	L R L
Sat...	17	98..95..	03.98.00	30.01	0....s2-4	s2-5..s2-4..sw2-4	68	76	70	71	ccs10....ncc10	ncc10..cc9..'ccnstr9	fog R R	R — --	
	18	00..06..	..98..00	30.02	0....s2-4	sw2-5..s2-4s..1-3	70	75	73	78	ncc10....ncc10	cucc8..cccu8..cccu5			R
Mon .	19	93	85		0....s2-4	s1-3..sw1-3.s1-0	71	74	..	..	ncc10....ccn10	cc3.....cucc3....cu1	Rain nearly	all day and	night.
Tues.	20		83.		0....s1-3	E2-3..E2-4.. E1-2	..	45	..	..	cc8..... cc9	cucc5....cc3....str1	Rain at in-	tervalsduring	day at C.Hill
Wed..	21		90		N0-1....w3-5	E1-3....E1-3....0	.	47	..	..	0	cucc4....cucc3.....0	ice at C.Hill		
Thurs	22		30		NE0-1...s1-3	E1-3..E2-4.. E1-2	..	56	..	..	0.........ci1	cuci5..cuci7...cicu2	ice do. do.		
Fri...	23		24		0....s1-3	SE2-4..s2-4..s1-3	..	50	..	..	cicc2....cucc5	cicu6............ci3			
Sat...	24		05		0....s1-3	s1-3.........s1-2	..	56	..	..	cicu3....cccu7	cucc4....cucc3...ci2			
	25	92.93.97	..85..84	29.89	0....s1-2	s2-4...s2-4...s1-3	57	73	67	66	cucc3....cucc5	cucc5....ccu6....ci1	spr.		
Mon .	26	92..80..	74.69.67	29.74	SE0-1..SE2-4	s1-3...s1-3...s1-2	40	76	65	62	cc2......cccu5	cucc4.. cucc4....cc1	frost		
Tues.	27	61..64..			SE0-1..SE2-4	s2-4... s1-3..s1-3	55	..	..	..	cistr1....cc2	cc3......cc2......ci1	. .		
Wed .	28	07			0....s1-4	s1-4...s1-4...s1-3	..	58	..	..	cicc5 ...cc3	cc2.....cc2.....str1			
Thurs	29				0....s1-3	s1-4...s1-2... 1-3	..	..	..	..	ci1......cc4	cc5....cucc4.....ci2			
Fri...	30		..82..84		0....s1-3	s1-3...1-3...s1-2	..	77	70	..	ccs1....cccu5	cccu5....cucc4....0			
Sat...	31	35.49.50	..49..51	30.43	0....s2-4	s1-3..s1-3..SE1 4	39	55	50	48	cucistr10....ci1	cc10....cucc5....ci1			
					Force of wind	as 2.91 is to 10.					Amount of clouds as 5.94 is to 10.				

Max. range 30.51 ; min. 29.'61. 30.'02.57 mean for 21 days. 61°14 mean for 21 days ; max. temp. 82°. min. 24°

General Remarks.—11th—Ice about ¼ inch thick in a bucket out doors. 12th Severely cold. 13th—6 a.m., air mild and soft. 14th—Very fine day. 15th—6 to 10 p.m., high wind from S. 20th—Weather find in Housson. 21th—Do., very cold. 22d—Do., milder. 27th—Rather cool at Galveston. 28th—Very pleasant 29th—7½ p.m., norther 4-6. 30th—A strong norther.

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THE

Galveston Medical Journal.

Vol. II. JULY, 1867. No. 7.

Erysipelas--Spreading Fire.

So-called from its disposition to spread from its point of attack to adjacent parts. This disease is classed among skin diseases and by some assigned to the vesicular from its sometimes forming bullæ or blebo ; that is, small blisters. It is either idiopathic or traumatic, that is, it appears without any lesion of the skin or from a point in which the skin is broken, if not larger than a mere mark or scratch ; from this point the skin reddens and burns like fire, producing a diffused redness over a limited surface—generally over one of the extremeties or the face, nose, ears, over the eyes and on the tongue.

The inflammation is of various kinds, erythemic, ædemitic or phlegmonic. It has assumed various forms and received various names :—St. Anthony's fire, sacred fire, ; bighead, where it attacks the head and swells it up like small-pox ; black tongue, where it begins in the tongue and swells it up so it cannot be retained in the mouth and remains permanently protruded; puerperal peritonitis, where it attacks the parturient woman. All parts of the skin and exposed mucous surfaces are subject to it. It appears most often in the legs, next the arms, then the head, next the tongue, and, lastly, the body. It appears to attack those parts most exposed to injuries and the atmospheric changes.

CAUSE.

It is epidemic in its progress ; seldom occurs in sparodic cases, therefore, we attribute it to some cause not generally prevalent, and cannot say that change of temperature or climate has much influence over it. The general system is always affected more or less before the diffuse redness of the skin appears, and whether the poison is introduced viscally or taken into the general system by the lungs or skin, or taken in with the food, is not yet determined. I believe that it is always traumatic; that the skin or mucus surface is broken, and from the natural and healthy inflammation that should set up to restore the lesion by a morbific cause in the blood or from some ingredient in the air, the part is poisoned and unhealthy inflammation is set up. If the blood is impoverished there is a tendency to burrow beneath the skin, forming phlegmonic erysipelas, and the part will become gangrenous and sloughs, will occur, even the bone or bones of the part will be distroyed. The skin soon loses its vitality and sloughs off leaving an irregular ulcer.

There is in many cases premonitory fever, but often I have seen severe cases without any increase of the pulse above health, especially where it was confined to the arms or legs. When the head or tongue is attacked it usually produces severe fever.

We have determined that the *primary or remote cause* is not constant and that *a wound is the exciting and immediate cause.*

Now, let us ascertain the spark that kindles the fire. This spark, or this exciting cause, is in the air, whether animal. vegetable or mineral, or a component part or constituent of the air itself. These are queries I am unable to answer; but one thing I do know, there is a local and periodical cause or causes that are not prevalent at all times and places. When we were a student of medicine in Shelby county, Tennessee, in 1845–6, we saw a good many in our brother's practice, some of every form we have mentioned. Some died of big-head, some of black-tongue, and some with erysipelitis fever complicated with intermittent fever. Dr. William Walsh, a fellow-student had it in Raleigh in 1847, after our return from Philadelphia. His head was as large as a half-bushel, but he recovered. Since that time it has not been prevalent in that immediate section of the country.

During the winter of 1847–48 seventeen parturient women died of this disease in De Soto county, Miss., on both sides of Cold-Water. It did not prevail in Panola to any extent, while it was so bad in De Soto. There were, however, a few cases in the neighborhood of Como, now called Sardis. It did not appear in that county again while I lived there, up to 1862, and I cannot speak of it since.

I have only seen a few cases since until the last two months in Galveston. Since forty-five days I have seen and treated nine cases, all originating in Galveston. I may safely say that these nine cases are more than I have seen or treated since 1852, when I first came to the State. I have heard of other cases in the city in the last two months, and one of our physicians lost his wife with this disease attacking her nose and spreading to her head and face. One of my students at the hospital had it on his lip, and for a few days was in a bad situation. A German woman now has it at the hospital around her eye. One man has it bad in his leg, from his foot to his thigh ; both are, however, recovering. One gentleman in the city had it to arise from an old wound from the horn of a beef running loose in the city. So we may safely say its epidemic influence is now prevalent in this city, but otherwise the city is remarkably healthy—never better at this season.

TREATMENT.

I have been universally successful in this disease, not having lost a single case, and my treatment was that I learned when a student. I give usually where there is fever a pill or pills of calomel, taraxicum and rhubarb, equal parts. Move the bowels well, then follow with quinine, sulphate or citrate of quinine and iron in febrifuge doses. I invariably apply nitrate of silver v. to xx. grs. to the oz. of water to the inflamed skin until I turn it black. If it colors the skin you need not fear sloughing, but if not the part is sure to slough and leave a bad ulcer, which I treat with bismuth, calomel and sweet-oil made into a paste and applied under oil-silk or tissue paper, continue the tonics of quinine and good rich food until the patient is restored to usual good health.

This plan has been so universally successful that I have not tried any other. Where it has attacked the tongue I have applied the solution with mops, and where it has attacked the womb I have used blisters over the hypogastric region with calomel and dovers internally alternately with quinine. Though I will state I have only seen a few cases of parturient erysipelas.

Sensation, Volition and Will.

THE MODUS OPERANDI OF MEDICINE.

SLEEP AND SPIRITUALISMS.

The subjects I wish to illustrate in this essay, are those impressions which we receive by or through sensation and those operations of the mind, which assist us in choosing or determining the course we shall pursue in this life, and the completion of this choice which we term WILL—the modus operandi of medicine, sleep, and spiritualism.

Sensation, Volition and Will are, in one sense, synonymous terms, Volition and Will being only manifestations of Sensation.

The word sensation is derived from the word *sensus* (*sentio*, I perceive,) and I shall use it to express every impression which an organic body is susceptible of, especially every animal creature.

Without sensation, this beautiful earth, and all that is on it, would be held by a profound inertia. There would be no pleasure nor pain, no love nor hate, no happiness nor misery, no hope nor fear, no ideas of anything, either innate or perceptive, internal or external impression. The earth itself would be but a rude, unintelligible mass, subject to no changes, no decay. But I shall confine myself to animal sensation illustrated by vegetable, mineral or aerial impressions.

In all animal life, there are three things necessary to the healthy continuation of life or sensation, viz. :—Circulation, Innervation and Respiration. There can be no life without sensation, and, were I to assert a dogma upon life, I would say that *Life is a sensation : and inertia or the loss of sensation—Death.*

Now we have asserted that there can be no sensation without innervation, and there cannot be innervation without circulation, so there cannot be innervation or circulation, for any length of time, without respiration. Each of these have peculiar organs in all animals for the performance of their respective offices. The brain is the centre of innervation, and its peculiar organ of sense; the heart is the organ of circulation, and the lungs of respiration. These three form a triangle or trinity. One corner of this triangle gives way first in all deaths. If one dies from asphixia, such deaths as from drowning, hanging, consumption, &c., the lungs, or respiration, give way first. When death takes place from the loss of blood, by the cut of an artery, bleeding, hemorrhage, or inebriation, or starvation, the heart gives way first. But when one dies from apoplexy, amentia, or dementia, the death takes place for want of innervation. So we see that, without these three, no animal life or sensation can exist.

The lungs are formed for the reception nf atmospheric air, and bring it in contact with the blood, as it passes through the capillaries of the lungs. This air is composed of three substances, oxygen, hydrogen and carbonic acid gas. At each respiration, it is ascertained that the lungs of a common sized man take in forty cubic inches of air, and throw off, at each expiration, 39½, so much of carbonic acid and water, being formed as would consume the half cubic inch of atmospheric air. This air in the lungs makes a great change in the blood, turning it from venous or black blood into arterial or red blood. This blood is prepared to assist the nerves in producing sensation, and wherever it circulates, there will be sensation. This blood is sent to all parts of the body by the heart. But should all the arteries leading to the hand or foot be cut, there will be no blood sent to these parts, and there can be no sensation, though there may be and are, thousands of ramifications of nerves in these extremeties. Again, we may cut all the nerves leading to the hand or foot, and the arteries may be left sound, and the circulation may be full and free, and there will be no sensation whatever conveyed to the brain. You may burn the hand or foot, and the being will not feel it. So we see that life, sensation, volition and will, all depend upon these three organs performing their actions; and that when one ceases, the others begin to fail, until all is senseless, or dead.

That principle that has been called Mind, Soul, Spirit, Heart and Life, is dependent upon these three things in all living bodies whether animal or vegetable, for all have a circulation, a respiration, and a rude innervation.

Man has sensation in common with animals and plants, but he is as much superior to them, as the power of his sensation is more acute, and enables him to choose what he will do, or to exercise volition, and to do what he determines; that is, fulfil his *will*.

Metaphysicians and mental philosophers, from time immemorial, have sought for some all-powerful agent that should rule and direct us, and "shape our ends rough hew them as we will." But we believe that agent is with these three principal faculties, and that, without these, there is no spirit, no soul, no heart. Matter itself, divested of these, would have only its specific gravity and attraction of cohesion, and would settle down to a profound *inertia*, as we have before stated.

Phrenologists teach us that the brain is the peculiar organ of sensation, but it is no more so than the heart or the lungs, the nervous substance being more insensible to external impressions than muscle or bone. The brain is the organ by which, and with which, we analyse our impressions; and by the exercise of this faculty, we are enabled to choose what course we wish to pursue, or to choose to remain still; or in other words, in it or with it, we exercise volition. Phrenologists teach that the brain alone is the organ of sensation, but Dr. Bennett Dowler has proven that there may be sensation without a brain; and in any portion of the body where there is a plexus of nerves, and a healthy circulation of the blood. But it is incontestibly proven that, with the brain alone, man is enabled to retain his impressions, that is, to remember the same, and to recall them, at his choosing or volition. For instance, he destroyed the brain of an alligator, and afterwards irritated the nerves of the spine, thereby producing muscular contraction, and when he would irritate on one side, he would move towards that side his tail and endeavor to move the body from the irritation. These experiments evidence as much sensibility, as if the animal had his head on, but I presume no one would contend that he retained these impressions, or could call them up at his choosing. We know that the brain, in its congested state, cannot retain any impression, as in apoplexy or epilepsy. While a person is in profound coma, from congestion or compression of the brain, there is sensation as exhibited in the pulsation of the heart, and the inspiration or expiration of the lungs; but we all know that there is no remembrance of anything done or said to persons in these conditions.

So we see that we may destroy memory by the exhibition of exhilarating gas (nitrous oxyde), and there will be an excited state of sensation, but no retention of these sensations, from the unhealthy circulation. The same phenomena are produced by the exhibition of chloroform, ether and other narcotics, all of which produce either congestion of the brain or an artificial asphyxia. In no instance is there a healthy circulation of healthy blood.

Again, other philosophers contend that the blood is a living fluid, is *life itself*. The late Dr. Hoit, of New Orleans, is of this class and has performed many experiments to prove his theory, and has in his investigations done more than any one ever has of giving a true explanation of sensation. But nothing can be more fully demonstrated than that the blood is quite dead and inert, without arterialization, and also without motion produced by the heart. It has no motion itself any more than water or any liquid which is alone moved by its gravity, attraction of cohesion, or capillary attration, which is common to all fluids, and is a law of matter. We are told in the Bible that the blood of an animal is the life thereof; but it can only be taken in a general sense, and is really no more the life of an animal than the air it breathes.

Another set of philosophers believe that the heart is the organ of sensation, or rather the seat of affections. Such expressions as these in the Bible, "The heart believeth unto righteousness," "From the fulness of heart, the mouth speaketh," &c., would lead to this conclusion. The anatomist knows that the heart is nothing but a hollow muscle, and without its own innervation and circulation, that it will cease to beat, and that it really has no more sensation than the muscles of the arm or leg, and it is partially independent of the brain, and not seriously affected by external impressions or internal emotions. Its peculiar office is to force the blood through the lungs, and again through every texture of the body, and even through its own substance; but has no power of choosing to act.

Before we can fully understand the physiology of sensation, it is necessary that we should understand the anatomy of the blood itself.

Blood is white in some of the inferior animals, as the Molluscæ, which are called white-blooded, in distinction to the red-blooded, as man, all the mammalia, birds, fishes and reptiles. Blood, as formed by the lacteals and lymphatics, is also white until it is submitted to air in the lungs where it assumes a red hue. Human blood, as we have before stated, is divided into arterial and venous, the former being of a bright red color, strong smell, and temperature about 100°, specific gravity 1,050; venous of a brownish-red, specific gravity 1,053, temperature 98°. It is about the consistency of new milk, thick, viscid, unctuous, full.

Living blood is divided into Liquor Sanguinis and Red Corpuscles, the liquor sanguinis contains all the constituents of the blood, with the exception of the red corpuscles, which, with the fibrin of the liquor sanguinis, forms the crassamentum of coagulated blood. The other elements of the liquor sanguinis forms Serum, of which water and albumen form the principal part. The liquor sanguinis is the "blastem" of the corpuscles, in which they are formed, and serves to develop them as the womb serves to develop the embryo. The corpuscles are now generally believed to be round in man, and the mammalia in general, elliptical in birds and reptiles, in their uncombined state, but capable of receiving any shape by combination and compression.

Each globule is composed of an envelop where the coloring matter resides, and an internal colorless nucleus. Their size and diameter are variously estimated by microscopical anatomists, from 1-1760 part of an inch in diameter, (Sir E. Home), to 1-6060, (Young), requiring from 2,000,000 to 6,000,000 of globules to the square inch.

It appears, from this great difference in these measurements, by different observers, that the globules are different in different persons and at different periods of their lives; but more of this when we come to speak of Transfusion, under another head.

The constituent, or physiological elements, of the blood are water, albumen, fibrin, an animal coloring substance, a little fatty matter, and different salts. The most important bases are lime, soda, magnesia, potassa and iron, according to the following analysis of the blood made by M. Lercanu:—

Water	780,148	Chloride of sodium	8,370
Fibrin	2,180	Chloride of potassium	
Coloring matter	133,000	Carbonate of phosphates	
Albumen	65,470	Sulphates of potash and soda	
Crystalline fatty matter	2,430	Carbonates of lime and magnesia	2,100
Oily matter	1,3e0	Phosphate of lime, magnesia and iron,	
Extractive matter soluble in water or alcohol	1,790	Peroxyds of iron	
Albumen with soda	1,265		
Loss in 1000 parts			2,400

From this table, it will be seen that the fibrin is about 3 in 1000, albumen 66 in 1000; water being four-fifths of the whole.

The chemical or ultimate elements of the blood contain all the elementary substances found in the animal system. Of these, there are seventeen:—oxygen, hydrogen, carbon, nitrogen, phosphorus, sulphur, chlorine, fluorine, potassium, sodium, calcium, magnesium, iron, silica, margarine, aluminum, copper. The four first are found in greatest quantity, but those at the end of the list exist in very minute proportions, and perhaps foreign to it. They are all found in a state of combination.

The weight of the blood in the veins and arteries is about 30 lbs., but some go as low as 8 lbs., and others as high as 100. The weight, as compared with the body, is as one to five, and the arterial to venous as four to nine. But these estimates vary much in different persons.

Having given the different analysis of the blood, we are prepared to go into an investigation of the office of the nerves.

The late Prof. Harrison says, "It must not be forgotten that the nervous matter diffused in the solids exerts a powerful control over those actions which make up the phenomena of life." If it be changed in its condition, the actions of nutrition, secretion and absorption are modified. The influence exercised by the organic solid molecules, by the nervous matter and by the nutrient fluid are all reciprocal. There is a perpetual change going on among them all. In health, their operation going on throughout the entire system is not felt, because it is the established, the physiological condition of the nervous substance; *whereas all sensations result from a disturbance of this state*, either by the intervention of outward objects or by internal causes. Many of these internal changes in the nervous substance are the necessary results of the actions going on in the system. Hunger, thirst, &c., are examples of this species of sensation; the primary cause thereof seeming to be the BLOOD ITSELF, which, during the process of nutritive action, has become altered in its condition.

In the above paragraph, Dr. Harrison has given a true history of the phenomena of life and the office of the nerves in these phenomena, but he has not given any rational explanation of how these changes occur, but closes by saying, "*the primary sources thereof seeming to be the blood itself.*"

Now we think we can explain this mysterious connection between the blood and nerves, this general and universal change going on throughout the ontire system; and, in so doing, we will have frequently to refer to the physiology of the blood and the nerves, which we have given.

We know that the nerves are but bundles of small fibres, and, in themselves, as insensible as the wire which conveys the electric impression from one city to another; and it is fully demonstrated that they perform a similar office in the human body that the wire does in the telegraphic operations, that it is not perceptibly changed by these transmissions, but if they are cut the transmissions cease, as in the telegraph, when the wire is cut, the impressions from the battery cease at the cut; but any body in connection with the wire, not insulated from it, feels the impression as much as if the line was complete; so with the nerves, any body in connection with them will feel the transmissions though they do not reach the brain. Hence the alligator's movements, hence the automatic life whilst the brain is congested, the paralysis when the nerve is compressed or destroyed in its course. The brain is the recorder of these transmissions as the pen and paper at the end of the telegraph, here they are recorded and retained until disease or death destroys them, and we can recall these impressions at our choosing or volition for they are fixed in the brain as we will endeavor to show.

Now let us see how these impressions are produced. All the experimenters we have quoted state the blood is necessary, and let us assume this as an established fact, for I do not believe it can be controverted.

The blood, arterialized by the lungs, contains all the elements of the body, as we have shown, and the globules are the active agents in all these phenomena, the other portions being only the "blastema" or formative liquor and the fluid in which they float. While the globules retain their integrity they make no impression upon the nerves near or or over which they float, but if they are compressed in their course they burst, and this fluid acts on the solids as the sulphate of copper acts in the galvanic battery when it produces the galvanic current, the solids acting as the zinc and copper plates in the galvanic battery. many thousands of these globules are destroyed, and by their destruction the particles that compose the globule, are precipitated and added to the solid as the copper is precipitated in the cup. Now, let us illustrate this subject by an example. Say I press the point of my left index finger with the point of my right, each makes an impression by the destruction of some globules, the fluid salts in these globules act on the extremities of the index nerves and the two impressions pass on to the brain. There is a reverberative action and a molecular change in the substance of the brain, and this is retentive, because the impression is fixed and can only be effaced by the removal of the molecular changes. The impression this nerve makes along its course indicates from whence it came. To supply the loss of globules the blood rushes to the part, and if the impression is removed the blood all pases on and no globules are destroyed, but if I press the two fingers too firmly together the blood becomes congested, more particles are destroyed than is conducive to health and inflammation begins; the tissues swell; more blood is sent to the part; more blood globules destroyed—the nerves are too much excited, the sensation is too acute, and we call the impression pain. The action in the brain is too severe, and experience has taught us unless we remove the pressure the part will die. Now we exercise our volition, and remove the pressure. The question now rises, how can we do this? The molecular change in the brain is increased and again the globules are destroyed, and an impression is commenced in the brain, it is sent forth to the muscles of the part, and here we fulfil our will by the contraction of the muscle and the removal of the two hands. As soon as this is done, all the effete matter of these globules is washed away with the venous blood, and if it is too firmly fixed for this, then the absorbents comes to play and removes this remnant, carries it again to the heart where new life is restored to it, or it passes off by the different sources as bile, urine or perspiration, or is exhaled with the carbonic acid gas from the lungs.

Whether our sensations are from external impressions, or from internal emotions, the pheuomenon is the same, the same destruction of globules takes place, the same excitement of the nerves takes place, and these internal sensations we term *thoughts*, the external we call IMPRESSIONS.

They are all impressions made on the nerves, and more than probable, from original impressions so modified by the peculiar form of the internal organs, their peculiar state, some have much more tone or tension than others, and, consequently, their impressions are more vivid and last longer. By constant impressions the irritation becomes fixed and is more easy to recall. All our ideas are nothing more than internal sensations produced by external impressions obtained probably at various times from our very infancy up to the present time. These ideas we call reason. Reason is nothing more than an exercise of volition, it is, in other words, a choosing from our past memory and arranging our memory into a general plan, and the perfection of this plan may be called WILL. All our senses, such as seeing, hearing, feeling and smelling, are performed in the same way as I have illustrated that of touch. When the rays of light strike the optic nerve of a child from a candle it excites a pleasant sensation in the orbit of the eye, and that impression is conveyed to the brain, where it becomes fixed, and the child is delighted with the candle, but bring it near enough and he will put his hand in the flame and get burnt. This is an impression produced precisely as in the example given of the fingers, but the destruction of globules is so fast that it produces pain or an excited state of sensation, his reason on past experience teaches him that until he put his hand in the flame he did not feel this pain, so he jerks it out by his VOLITION and keeps it out by his WILL. These become permanent impressions and last through life. If the child continues to see the candle he remembers the light from the optic impression, and he remembers the hurt from the touch.

The ear hears in the same way. The air is conveyed to the ear in waves, it strikes the drum, the drum moves the fluids through the bony cavity and makes the impression on the nerves of the ear by the destruction of these same globules, and the same phenomena occur as in the eye, if the waves of air are too severe they destroy all the globules in the ear and for a time one is deaf. In the firing of a number of cannons, at the same time, the waves of air are so strong, that every blood globule is destroyed, and a powerful impression is made on the brain, and though the person may be made perfectly deaf, the smoke and flame will teach him that there is still a great motion in the air, though he is incapable of hearing it. But other concussions of the air may be so strong that it will destroy globules all over the surface of the body, and he really may hear by that means, and from his memory know that he does hear; from all these he may choose or exercise his volition and determine to get away and leave, which is his WILL.

Taste is also produced in the same way. Take anything into the mouth that is nearly of the same properties with the elements of the body and the sensation is pleasant; that is, it produces a mild impression, which I will call natural, because it is common and not enough to produce pain, and a pleasant impression is made on the brain; but take an acid into the mouth and it destroys these globules, and that shocks the nerves so as to produce pain, and if so many are destroyed that the veins and absorbents cannot take them up, we have a sore tongue. Our eyes have made us acquainted with its color and form—our touch with its shape, so when we see or feel this substance we reason or associate these sensations and choose to not drink acid, but water; this choosing is volition—this abstaining is WILL.

The sense of smell is exercised in precisely the same way. The same phenomena occur. The smell of an apple or pear is an impression made on the globules of blood circulating in the cavity of the nose. but this obstruction is mild and agreeable, does not excite a rush of blood to the part, but should our nose be brought to a close contact with Ammonia, there would be a great destruction of globules, the nerves would thrill and the sensation would be what we call pain. Now, as before, our eyes have informed us, by their peculiar office, the size and color of the apple or pear, and the ammonia, the smell of one is mild and pleasant, while that of the other is acute, and by comparing these impressions we reason or choose, and this choosing is volition, and the eating of the apple or pear and avoiding of the ammonia is WILL.

Hunger and thirst are alike sensations, and produced by the same agents, and are real sensations—created more particularly in the stomach, and caused by the irritation of the gastric juice, just as the ammonia on the olfactories. The acid on the tongue—the fire on the child's fingers—the rays of the sun on the optic nerve. These impressions are as varied as it is possible to receive. If we are given food, and we eat, we stop this irritation, and the stomach digests, the body is nourished and the lacteals and lymphatics are fed, and the globules are renewed. But suppose we take poison instead of food into the stomach, say corrosive sublimate, and we increase this irritation, or, in other words, we produce a great destruction of globules. produces a shock to the nerves and we have pain, and should there be more corrosive sublimate than the absorbents and veins can carry off, then the poison passes into all the tissues; wherever it goes it destroys globules and shock the nerves, and the patient or sufferer dies, his whole system of globules being dead and the nerves exhausted. What a great contrast between this poison and a good dinner! but the effects of both are produced in the same way and by the same causes.

Granting that these phenomena are produced in the way I have stated (and I do not believe it can be controverted) all the pathological states of the organs as well as the physiology can be perfecly explained, and all the operations of medicines upon the body, or emotions of the mind, may be understood. It now becomes an inquiry how the BRAIN RETAINS THESE IMPRESSIONS—HOW WE RECALL THEM? This is the most difficult part of my subject and one that has puzzled philosophers and divines for ages to give a rational explanation. Most, nearly all, ascribe this to the mind, the soul, the spirit, to one essence from *God himself.* Monsieur Victor Cousin, author of a history of modern philosophy, says, "the will alone is the Person, the Me. The Me is the centre of the intellectual sphere." Now, according to the definition of WILL I have given, this is but the fulfilment of the determination of the VOLITION; for instance, the Bible is the *will* of God. It is the declared election or volition of God in reference to man. Now assuming this definition of M. Cousin to be true, the act of man alone is his Me—his soul, his ideality. Now his acts are but his impressions manifested by his WILL. and his will is either good or evil according to his choosing or volition, and this is his Person, his intellectual sphere. Explain it thus and M. Cousin's definition will be as good as any yet given.

Dowler says, "Nothing is known of the mind except through its materialistic phenomena." This is plain to every one, but Dr. Dowler appears to contrast this assertion of his in the following part of his paper on nervous action, where he uses the following language: —

"Mind in itself, in its immaterialistic constitution, in its disembodied form, as a specific entity, distinct and apart from matter, eludes physiological, phrenological and metaphysical research."

"Sensation is not produced by the intermediary agents called transmitted impressions or ideas, but is an intuitively felt relation between the Me and the not Me—the subjective and the objective, founded on imediary and intuition, and not on representationalism, being like every other self-evident fact, incapable of any proof stronger than that which is inherent in itself."

Upon an explanation of the words Subjective and Objective, Dr. Dowler says, "Sensation is, in its own nature, subjective; but it may originate either subjectively, that is, in the mind; or objectively, that is, from impressions derived from the outward world. The one is psychical, the other is physical or sensuous in origin, but" (he goes on to admit) "the effect is the same in both, namely, a state of feeling or conscious excitation being induced."

Again, he says, "In a certain sense, however, the mind, when directed to itself and its conscious faculties and conditions, becomes objective to itself, a peculiar prerogative—a combination of subjective and objective." While upon this same subject he says, "All attempts to explain this fit relation, tend but to make it more obscure, that change, or sensation, or relation that takes place between the object seen and the subject that sees, cannot be defined." But I differ materially from him, if not entirely. I believe this relation can be explained, and I think I have done it in my explanation of the act of seeing. The impression of the image on the optic nerve of the eye is made by a destruction of globules, and, as before stated, if this destruction is too great, it destroys all the globules and amaurosis or want of action in the optic nerve is the result. I once attended a patient who died from pure starvation or inanition produced by a long continued diarrhœa. He became so feeble for nearly twenty-four hours before his death, that when I raised his head for him to drink water, he would turn perfectly blind, and in a frightened condition he would cry out, "I am blind, I am dying." After laying him down and pulling the pillow from under his head, his sight would return, and he would again become cheerful and talk and reason upon these phenomena, asking me for an explanation. I told him he was so weak that his heart would not force the blood to the optic nerve while his head was raised, but when it was lowered, the blood would have a tendency to return by its specific gravity, and but a feeble effort of the heart was necessary to carry it to the nerve with this assistance. When the blood reached the nerve the rays of light destroyed certain globules and these globules produced an impression on the nervous extremities and these made an impression on the brain by which he would recall his lost sight to mind. With this explanation he would not let me raise him up, but drank all his water afterwards through a reed by suction, and he did not suffer from this feeling any more. But he complained that the suction of the water took away his breath. He asked me to explain this. I told him while sucking the water he could not breathe, and that he was now reduced so low that he had now to breathe forty times a minute instead of eighteen or twenty times as when he was in health, that if he did not breathe, his blood would become black or like venous blood, and that, in that condition, it would not give power to the muscles of the mouth by the destruction of globules of blood in them, and there would be no power to draw the water. And by this act he destroyed many globules of blood which was his food and strength. But again he asked me, why do I want to drink so often? I want water every two minutes. Here was the most difficult question of any to answer, and really I did not think he could understand it, but he had been a philosopher, and, as he said, a pretended *infidel.* He was attentive until I told him that for a long time the food he had eaten did him but little good, that it passed off without passing into his system through the lacteals and lymphatics, and that his blood had to be fed from the particles of his own body, that the water, being a fluid, passed into the circulation more easily and sustained these particles of the body, and washed them along as the water washes the sand, and carried these particles of his body to the lungs, and there his breath made blood globules of them, and these globules floated on with water until they came to the muscles he used in breathing, drinking and talking, and there they were destroyed, and that portion of these globules that was not precipitated, had to be carried to the kidneys, lungs or skin to be thrown off, or they become irritants in the system and destroyed his other blood, and made the poor poorer and the weak weaker; but if his heart continued to beat, then his blood would go to all these places, and they would act and carry off the affected substances. and the water would be used up and he would want more.

While listening to me he became partially deaf and asked me to speak louder, that he could not hear.

And now, though he did not ask me, I will explain to you how he became deaf. All the blood globules that were in the cavity of the ear were destroyed, there was not power enough in these tissues to remove the precipitated particles nor retain sound globules, and the nerves had no excitants, or not so many, though my voice was as loud and the waves of air produced by it was as strong, still there was no impression conveyed to the brain, but when I spoke louder, the vibrations were stronger and the nerves more excited, and the impression reached the brain.

While illustrating to him these various phenomena, I perceived his breath became shorter, and his heart beat faster, and he could not speak but in a whisper, and, finally, his pupils began to dilate, and again he appeared frightened, and with this struggle the breath left him, his chin sunk, his pupils were entirely dilated, and the *soul* was *gone*, the thinking principle was for ever extinct in this body.

I told you in a former part of this essay that "sensation was a trinity, a triangle, one end of which gave way first. This trinity was Respiration, Circulation and Innervation, one of which will begin to fail first. This man was an example of death from starvation, and the circulation was the first to give way, then the respiration, and last his consciousness, which was his innervation, as evinced to the last his clearness of mind, his power of volition, as manifested in drinking water through a reed instead of from a glass, his WILL in lying still on his back and not raising his head. But how shall I explain to you the strength and long continuance of his mind—his innervation?

The brain—the peculiar organ of sensation, or rather memory—is in the cranium or skull. The skull is nearly a closed cavity, it is so solid that externel atmosphere does not make much impression upon it, and hence the quantity of blood or fluids in the brain are more equal at all times than in any portion of the body. Two-thirds of the whole blood goes to the head and is used in fixing these impressions and creating external muscular contractions as the blood sent to the brain is arterial and returns as venous we know that the same phenomena occur to it in its progress through the brain that it does through other portions of the body.

The blood. as I have told yon, is changed, and this change is first from red to brown or black, from a higher temperature to a lower, from 100° to 98°, and from a lighter to a heavier substance. All this change is easy to account for in its various chemical changes, first it parts with part of the oxygen it obtained in respiration, and which lessens its heat and it becomes more dense by the formation of carbonic acid gas. Then it takes up the destroyed particles of globules, brings back a portion of the salts, holds these salts in solution to take in a new quantity of oxygen, and holds it in combination until it is called for in the phenomena of thought, reason, or volition.

Now this solid cavity of the skull is filled with blood and nervous matter. When the quantity of blood is lessened in the extremities, it is still full. The blood may be poor in globules and our impressions will be feeble in proportion, but in this kind of death the atmospheric pressure assists in keeping the blood in the brain when it is removed from nearly every external portion. The destruction of globules lessens the pressurs and the atmospheric pressure forces other portions up to take the place of those destroyed, though the heart is feeble. Wherever red globules are there will be sensation, and as the globules hold their integrity longer in these deaths, hence the mind is clear until after the breath is gone, which was the case with this man.

Now we are prepared to explain the "*subjective sensations—those intuitively felt relations*" between the Me *and the not Me*, which Dr. Dowler thinks cannot be explained. That sensation is in its nature subjective is true, or there could not be a diffused sensation which he has plainly proven by his experiments upon the alligator. But when he says that subjective sensations are psychical, and objective sensations are physical, I must differ with him. The same phenomena occur in both cases, and are produced by the same actions, but one is from external impressions and the other is from internal impressions. One, the objective, is from impressions on the external circulation and destruction of external globules, the other or psychical, from the cranial circulation and by the intercranial destruction of globules. The one is conveyed to the brain, the other originates in the brain or is recalled there.

This, I think, Dr. Dowler partially admits when he says, "the mind, when directed to itself and its conscious faculties and conditions, becomes objective to itself," which he calls "a peculiar prerogative, a combination of subjective and objective." Now it is possible for there to be sensations at the extremity of the nerves, and these may be produced by an object seen, and this object may make its impression upon a nerve, as the optic, and this impression be conveyed to the brain and at the same time the subject that sees may be exercising the same principle to retain this impression in the memory and also to send back a thrill to the muscles of the eye or take in more rays of light, to make a greater impression on the optic nerve, so as to make impressions more durable and lasting in the mind. And so, likewise, when I was asked by my dying patient to speak louder that he might hear, I think these impressions are produced in the same manner. There was a want of excitement in both instances. Now the question comes, was this want an *innate idea* or was it subjective or psychical, or was it objective or physical. I think there was an exercise of "*this peculiar prerogative of the mind*" that called both into use. This peculiar prerogative of the mind I would call that faculty of the nervous fluid or whatever it may be termed that enables a nerve to pass an impression from the brain to the extremity and from the extremity to the brain, and I think the phenomena of life justifies this presumption. The telegraph is now so perfected that a communication may be made over the same wire from both extremities, and why should not the nerves possess the same power, and who can assert or prove they do not? And, as Dr. Dowler has proven by his incomparable experiments, there are not two sets of offices in the nerve or brain, and that all this talk about four sets of nerves, *sensory* and *motary* to the brain, and an *excitory* and *motary* peculiar to the spinal marrow, is mere jargon, meaning nothing, to which I most cordially agree. But by assuming the premises I have laid down as facts, every phenomenon can be better explained than even with these four systems of nerves, and well did Dr. Dowler assert that the nerves having two roots was no proof that their office was different, any more than because the biceps muscle had two heads, therefore, it had two functions.

We are now prepared to understand what we mean by thoughts, ideas imaginations, &c., &c. Thought is defined to be "*Consciousness of a Sensation without the precurrence of a distinct impression.*" It is a *subjective sensation* produced by the destruction of interior globules. These impressions may be remembered as external impressions and we may reason on them, compare them, may choose from them; that is, we may exercise volition in choosing God and shun the *devil*. I really am not prepared to assert that these ideas or thoughts were really innate, but I am disposed to thing with Locke that there are no innate ideas whatever, and all facts go to sustain this opinion. The circulation of the blood is an impression, it destroys globules by its dilation of the the coats of the arteries, and where these arteries become contracted there will be a great pressure, this pressure will destroy globules, and this destruction will affect the nervous mass, and this excitation will reach the distant extremities of the body as we see in various every-day occurrences; for instance, by striking the ulna nerve at the elbow we have the sensation of an injury to the inner fingers, and pressure of the sciatic nerve produces a sensation of "pins and needles" in the foot, and we say our foot is asleep. And again the inflamed nerve of an amputated stump conveys to the patient's mind a distinct sensation of the amputated extremity so that to the patient it appears that he still feels his toes and fingers pain him when they have been removed and are really dead. His present pain must originate in the brain by a destruction of globules, and this destruction of globules is produced by a molecular change made in the brain by the former external or objective impressions.

Other movements of the globules in the brain are produced besides those that are natural as by a Hyperæsthetic condition in which the persons consciousness is embarrassed, these movements produce false presentations, illusions, phantoms, dreams and that condition in which persons are troubled by SPECTRA. The same condition of the brain pertains where the centre of consciousness abnormally excited forges, subjectively, all manner of images of incident or circumstance, with a self-assurance of their reality, just as the patient entertained of his pain in the amputated stump.

All the irregularity and incoherency of our dreams, and the false impressions of lunatics, perverted affections of madmen, the trances of cataleptics, the illusions of spiritualists, are produced by these globules being destroyed in the brain, and the quantity and strength of these false impressions are in proportion to the strength and durance of the external incitant which produced the first molecular change in the brain. There are many diseases that increase the proportional quantity of these globules in the blood, as in all cases of plethora, madness, &c., &c. In no situation of disease is the proportion of globules so great as in cancer, and in no disease is there more pain with so little alteration of the parts affected. Again, the globules are lessened in all ordinary cases, such as fevers, chlorosis, consumption, &c. Consumption is the least painful disease and also has the fewest globules. These facts go far to sustain the premises I have before laid down. We may still further illustrate this fact by our daily observations of persons. One looks red, hale and hearty, is capable of doing and thinking a great deal, but one who looks pale and emaciated is feeble in both body and mind. That is, they choose slowly and act feebly. They have poor VOLITIONS and worse WILLS:

Every passion of the mind can be explained by these facts. All pleasurable sensations are produced from images in the brain by objects that afford pleasure, such as love, joy, hope, &c. All painful thoughts or ideas arise of things that produce pain, as hate, anger, malice, &c., &c. A man is a good man or a bad man just in proportion to the pleasant or painful impressions he has inherited or received. Hence that wise injunction to "train up a child in the way he should go, when he is old he will not depart from it." As his impressions are made so will they last. So can they be recalled. So he is happy whose conscience (or moral remembrances) is good, or whose past impressions are not painful, and he is miserable when these remembrances are painful. Let me illustrate:—The christian minister is happy because he has the image of redeemed souls bestowed in his heart, and looks to eternal bliss. The murderer is miserable because he has the image of a dying man in his mind and expects eternal death.

The phenomenon of sleep is also an illustration of the truth of this theory. While one is asleep, his consciousness is dull and the impressions are mild, and no destruction of globules takes place. All is peace and quiet, and the blood removes all waste matter, removes all the dead globules and all precipitated substances, and prepares the blood to receive new impressions. Hence Darkness is conducive to sleep, so quiet, both of body and mind. When our impressions during sleep are perverted or painful, the impressions are painful and vivid, and we recollect them. They are quite disconnected because the impressions are not controlled by Volition. When these impressions are not controlled, and the true separated from the false, by means of the external sensations, the understanding runs into all sorts of phantoms. Just what we might suppose by excluding all light, all motion, all touch as is the case in sleep. The impressions become to the whole mind what the loud noise of a cannon was to the ear, and what the rays of the sun were to the eye, and the acid to the tongue. The various destructions of globules destroy so many, there has to be an entire regeneration of them in the brain, and while this is going on the person sleeps, and when this regeneration is complete the sensations become again active and light stimulates them, the crowing of the cock awakes the ear, the morning zephyrs awake the touch, and all is awoke. But if the past day's impressions are not effaced, or the irritation of some past impression produces a remora of blood in any part, and that part holds the impressed image, it is again excited and the patient dreams, and when he wakes it is still in his mind and he can relate it to his friends. THUS HE DREAMS.

Shakespeare has most beautifully described these false impressions in his "Midsummer Night Dream," where THESESEUS says:—

"More strange than true, I never may believe
These antique fables, nor these fairy toys.
Lovers and madmen have such seathing brains,
Such shapings, fantasies, that apprehend,
More than cool reason can comprehend,
The lunatic, the lover, and the poet
Are of imagination all compost;
One sees more devils than the worst hell can hold—
That is the madman; the lover all as frantic,
Sees Helen's beauty in a brow of Egypt;
The poet's eye, in a fine frenzy rolling,
Doth glance from earth to heaven and from heaven to earth,
And as imagination bodies forth
The forms of things unknown, the poet's pen
Turns them to shapes and gives to airy nothing
A local habitation and a name,
Such tricks have strong imagination;
That if it would apprehend some joy,
It comprehends some bringer of that joy;
Or in the night imagining some fear,
How easy is a bush supposed some bear?

HYPOLYTA.

But all the story of the night told over,
And all their minds transfigured so together
More witnesseth than fancy's images,
And grows to something of more constancy."

Lest some should accuse me of materialism and infidelity, let us again return to the subject of the soul as so-called by divines, and again return to the assertion that all we know of the mind is through materialistic phenomena. Our very ideas of Diety are from the examination of his works. They are not innate, but we learn them by analysis and synthesis, that is, by comparing what we can see, feel, &c., with what we cannot see and feel, but what the laws of seeing and feeling have taught us must exist in the nature of things. Take for instance time. Dr. Young says:—

"We take no note of time, but by its loss."

We know we have lived through yesterday, the past week, the past year, and that our fathers lived before we were born. So we reason and infer that those days have been, come and gone forever, and so long as we have lived, and our fathers have lived, so we expect to live.

So with space. We can see a certain distance, we can measure that distance, and from this point we can see so much farther, and from that so on; hence we infer that there is no limit to space. We see the works of God, we know that we cannot make these things, we see that these things are controlled by laws. We make certain things, as a watch or clock, we know the laws of motion and we know to the minute that the clock or watch will stop, and give the reason why it will do it; so we know that the earth moves, and that it moves by certain points in a certain number of days, and so with all the planets. We know of no one who is capable of making these bodies or these laws, we know they are made, hence we infer there is a God—who is the maker and ruler of all things. As these bodies have existed ever since the mind of man existed, have never undergone any material changes,—hence we infer that they never will change, hence they will exist forever, all must exist forever. If one changes we may infer all will change, and if one dies and lives again, all will die and live again. If one man has a living soul all men have living souls. If God breathed into Adam, and Adam became a living soul, so God breathed into all men, and all men became living souls. Hence the breath is the living soul. Breath is nothing but air in motion, so all souls are but air in motion. But air in motion is capable of producing impressions upon living organic bodies and also on inorganic bodies, being angels and spirits, and once in motion will continue in motion throughout space and throughout time—hence it is ETERNITY. Every act of man marks itself upon the air, and hence every motion of man is recorded. Every word we say is air in motion, and it can never be effaced, so it is irrevocable and indelible. Every pulsation of the heart, and every breath we breathe, is air in motion and can never be lost. These movements are the books of life out of which our past lives will be read, and from which we will in the [illegible]t day be judged.

American Medical Association.

EIGHTEENTH ANNUAL MEETING, CINCINNATI, OHIO.

FIRST DAY.

TUESDAY, MAY 7, 1867.

The Association convened at 11 o'clock, in Hopkins's Music Hall, and was called to order by the President, Dr. Henry F. Askew, of Delaware. After a prayer by Rev. H. M. Storrs, D.D., of Cincinnati, Dr. John A. Murphy, as Chairman of the Committee of Arrangements, welcomed the delegates in a brief address; after which he announced the places of meeting of the different "Sections."

Dr. Murphy also announced the time and places of the various entertainments and receptions.

After the calling of the roll of delegates by the Secretary, the President delivered his inaugural address.

REPORTS OF COMMITTEES.

The Reports of Committees were next called for, and disposed of as below designated.

On Quarantine, Dr. Wilson Jewell, Pennsylvania, chairman. Not present; subject dropped.

On Ligature of the Subclavian Artery, Dr. William Parker, of New York, chairman. Postponed for the present.

On Progrsss of Medical Science, Dr. Jerome C. Smith, New York, chairman. No report ready—committee discharged.

On the Comparative Value of Life in City and Country, Dr. Edward Jarvis, Massachusetts, chairman. Postponed for the present.

Drainage and Sewerage of Cities, etc., Dr. Wilson Jewell, Pennsylvania, chairman. Absent in Europe—committee discharged.

On the Use of Plaster-of-Paris in Surgery, Dr. James L. Little, N.Y., chairman. Report referred to the Section on Surgery.

On Instruction in Medical Colleges, Dr. Nathan S. Davis, Ill., chairman. Made special order for Wednesday morning at 10 o'clock.

The Report on Medical Education took a similar course.

On Rank of Medical Men in the Army, Dr. D. H. Storer, Mass., chairman.

Dr. D. H. Storer stated, that owing to illness during a portion of the time allotted him to give the subject requisite attention, he was unable to report; that one member had been absent for some time, and another had assured him that it was inexpedient at present to urge further reforms. Report received and Committee discontinued.

RANK OF MEDICAL MEN IN THE NAVY.

Dr. W. M. Wood, U.S.N., chairman, reported through Dr. Ninian Pinkney, U.S.N. He contended that while men of the medical profession were everywhere recognized as the equals of those in other professions, in the navy they were degraded below the military, inferior in age, in experience and rank. He said:—

"Our service is overgrown with usages which sprang up in the earlier and ruder ages of naval life, and still cling to it with a power and tenacity which almost defy modern enlightenment, progress and even law. It is probable that the national authorities which organized the existing rank of medical officers intended to confer a more substantial fact than the usages of shipboard life have permitted. Among the usages of the service is that which limits an officer's rights and comforts to the apartments in which he messes, even though his rank actually entitles him to higher privileges and greater comforts than belong to those of an inferior rank who make up the majority of the inmates of that apartment. The steerage is the most humble of those apartments, and is the dwelling-place of the very young, or those of no responsibility. The ward-room gathers in it most of the commissioned and some of the warrant-officers, and was originally occupied by none of higher rank than lieutenant. All its usages and government are still conformed to the scale of that grade.

"Now, make a medical officer in name an Admiral, and leave him to be ward-room officer, and the title becomes ridiculous. It is sunk below the usages and restrictions originally designed for those of junior years and inferior rank.

"There is only one mess which is superior to these restrictions, and that is the mess or messes of the commanding officers, and their associates, who may range in rank from a Lieutenant-commander to an Admiral. Sometimes there are one, sometimes two of these messes. This is very properly left to the will of the Commander-in-chief, who may choose that he and his Captains may have one or separate establishments. The Assistant Surgeons enters the service with the rank of 'Master.' That this title may not be misunderstood, it may be necessary to explain that it is the lowest rank in the ward-room. For the incumbent is in modern times generally a graduate of the Naval Academy, awaiting his promotion to lieutenancy. Like the 'Master,' the Assistant-Surgeon at once becomes a member of the ward-room mess, and unless the number of partitioned-off sleeping-berths contained in the ward-room are occupied by his seniors, he may have the good fortune to occupy one of those that are dimly lighted by an air port, six inches in diameter. This space is so restricted, and the separation from the common apartments is so slight, that words in an ordinary voice in another become common property."

After further presenting the discriminations against medical men in regard to shipboard accommodations, the Doctor said:—

"The general law is, that no officer shares in prize money unless his name be borne upon the books of the vessel making the captures, and the Admiral or Commander-in-chief has a percentage on all prizes made. The Fleet-surgeon, as a member of the Commander-in-chief's staff, must be with him in the flagship, and, as a rule, at the post of greatest risk, responsibility and hazard; consequently he is not likely to have his name borne upon the books of the subordinate vessels making captures, and yet no share of prize-money is allowed him."

The report suggest the following as a remedy for these evils:—

1. After they have reached the rank of Commander, or are filling the position of Fleet-surgeon, let them be by right, as they often have been by courtesy, members of the cabin mess. If the mess of the commander-in-chief be too exalted a social position for the members of your profession who are filling the important position of Fleet-surgeon, then let them be members by right of the mess of the Commander of the ship and the Fleet-captain.

2. An equitable arrangement of prize-money, most important in principle, your Committee hope to see effected. It will, however, require future legislation.

In European countries, the Doctor said, more liberal regulations prevail in regard to naval surgeons than in democratic America.

The late Admiral Foote, so justly distinguished for his large medical liberality, advocated the highest rank for naval medical officers. An Admiral among the most distinguished in the service, has authorized it to be officially said, that he thought the Fleet-surgeon should, in our service, as in the French, be a member of the Commander-in-chief's staff and family. We regard it as opposed to the public interests of the service, which can never be sacrificed to gross indignity without detriment.

Dr. John C. Hupp, of Wheeling, W. Va., offered the following:—

Resolved,—That the able, practical, and eloquent report just read by Commodore Pinkney, in behalf of medical officers of the navy, be referred to the Committee on Publication, with instructions that it be published, Carried.

Dr. Pinkney then offered the following:—

Resolved,—That a special committee of five members be appointed by the President to present this subject before the President of the United States and the Secretary of Navy, and urge the adoption of the changes proposed. Carried.

Dr. Post, of New York, moved that the same committee be instructed to memorialize Congress on the subject of awarding prize money to medical naval officers. Carried.

The Committee on Insanity, Dr. Isaac Ray, of R. I., chairman, made no response.

Dr. H. R. Storer, of Mass., opposed the motion to drop the subject, and commented upon the exclusiveness of Insane Asylum Superintendents. He said that the Committee evidently did not, in accordance with their policy, intend to report, and alluded to their spirit as manifested in Dr. Ray's printed statements, that none but experts should testify in the courts regarding matters affecting the sanity of the individual. He suggested, therefore, that this committee be discharged and a new one created.

The subject was, on motion, postponed for further consideration.

The Committee on American Medical Necrology, Dr. C. C. Cox, Md., chairmam, reported the performance of its duties, but owing to the length of the document, the reading was for the present deferred.

The following Committees, not being present, were discontinued:—

On the Causes of Epidemics, Dr. Thomas Antisell, D.C., chairman. On Compulsory Vaccination, Dr. A. N. Bell, N.Y., chairman. On Leakage of Gas-pipes, Dr. J. C. Draper, N.Y., chairman. On Alcohol and its Relations to Man, Dr. J. R. W. Dunbar, Md., chairman.

The Committee on the Various Surgical Operations, for the Relief of Defective Vision, Dr. M. A. Pallen, Mo., chairman, had no report. Dr. Pallen's request to be excused from further service on the committee was granted.

The following Committees, having made no response, were on motion also discontinued.

On Local Anæsthesia, Dr. E. Krackowizer, N.Y., chairman. On the Influence upon Vision of the Abnormal Conditions of the Muscular Apparatus of the Eye, Dr. H. D. Noyes, N.Y., chairman. On the Comparative Merits of the Different Operations for the Extraction of Vesical Calculi, Dr. B. I. Raphael, N.Y., chairman. On the Therapeutics of Inhalation, Dr. J. Solis Cohen, Pa., chairman.

The following Committees were represented as likely to report, and passed for the present:—

On the Deleterious Articles used in Dentistry, Dr. Augustus Mason, Mass., chairman. On Medical Ethics, Dr. Worthington Hooker, Conn., chairman.

Of the Committees On the Climatology and Epidemics of the several States, the reports of Drs. Alfred C. Garrett, of Massachusetts, and R. C. Hamil, of Illinois, being the only ones ready, were referred to the Section on Meteorology, Medical Topography, and Epidemic Diseases.

The reports of the Treasurer and of the Publication Committee were then submitted.

The recommendation of the Publication Committee that the payment of money for prize essays be abolished, and in lieu thereof a certificate with a hundred printed copies of the essay be furnished the author, was debated as a motion, and deferred to further deliberation on the morrow.

The following papers were read by title and disposed of as below designated:—

On the Causes of Cholera, by N. S. Davis, of Illinois. Referred to the Section on Meteorology, Medical Topographp, and Epidemic Diseases.

On a New Medium for the Preservation of Anatomical and Pathological Specimens, by Dr. Clapham. Referred to Section on Anatomy and Physiology.

On the Action of Belladonna in Diseases of the Cornea, by Dr. Jos. S. Hildreth, of Chicago. Referred to Section of Surgery.

A Bibliography and Observations on the Present Condition of Aural Medicine and Surgery, by Dr. Laurence Turnbull, of Philadelphia. Referred to Section on Surgery.

An Abstract of the report on the Therapeutics of Inhalations. Referred to Section on practical Medicine and Obstetrics.

Observations on the Application of Rhinoscopy in Diseases of the Ear, by Dr. Lawrence Turnbull. Referred to Section on Surgery.

Clinical Thermometry in Diphtheria, by Dr. Joseph G. Richardson. Referred to Section on Practical Dedicine and Obstetrics.

On Extra-Uterine Fœtation, by Dr. Stephen Rogers, of New York. Referred to Section on Practical Medicine and Obstetrics.

On the Treatment of Diseases by Atomized Medicinal Substances. by Dr. I. Field, of Iowa, Referred to same Section.

The hour for the meeting of the various Sections was fixed at 3 p.m.

The meeting then adjourned to meet on Wednesday, at 9. a.m.

SECOND DAY.

WEDNESDAY, May 8, 1867.

Dr. Henry F. Askew, President, in the Chair.

The Association met pursuant to adjournment. The following were announced members of the Association by invitation :—

Drs. J. Taylor Bradford, Augusta, Kentucky. John P. Phister, Maysville, Kentucky. Wm. L. Atkins, Geo. H. Whiting, A. B. Duke, M. L. Forsythe, Paul Rankin, of Kentucky. M. W. Junkins, Galen Hart, E. P. Harrison, of Ohio. D. R. Greenly, Meadville, Pennsylvania. Fred. Wolf, Concord, Maryland. Eugene B. Harrison, Napoleon, Ohio. B. F. Hart, Marietta, Ohio.

Dr. Atkinson moved that a recess of five minutes be granted to enable the delegates to make their appointments to the Committee on Nominations. Carried.

The time having expired, the Secretary announced the Nominating Committee :—

For Vermont, J. N. Styles; Mass., H. R. Storer; R. I., Otis Bullock; Conn., B. H. Catlin; N.Y., Ellisworth Eliot; N.Y., Samuel S. Clarke; Penn., John L. Atlee; Del., H. F. Askew; Md., J. D. Cockrill; W.Va., J. C. Hupp; Ohio, R. McIlvaine; Ky., D. W. Yarnell; Indiana, J. S. Bobbs; Ill., H. A. Johnson; Mich., A. B. Palmer; Iowa, J. C. Blackburn; Mo., B. F. Shumard; Texas, Hurd; D.C., Johnson Eliot; U.S.N., Ninian Pinkney; U.S.A., J. J. Woodward; Wisconsin, N. Dalton; Kansas, John Parsons; California, T. M. Logan; Tenn. T. A. Atchison.

A communication from Prof. Alden March was then read, in which he announced for transmittal to the custody of its proper officer, an album containing the photographs of the Presidents of the Association, from its organization up to the present period. He also declared his intention to add the portraits of future Presidents.

The gift was accepted with thanks.

Dr. March made a few pertinent remarks in return.

Dr. Cox read the report of the delegation to the Foreign Medical Associations, giving an interesting resume of the proceedings of the British Medical Association, which met in Chester, England, August, 1866.

Report received and referred for publication to the appropriate Committee.

DELEGATES TO THE INTERNATIONAL MEDICAL CONGRESS.

The President then appointed as delegates to the International Medical Congress, Drs. B. F. Barker, J. E. Tyler, and T. C. Brinsmade.

Dr. Atlee moved that the Nominating Committee be instructed to suggest additional names. Carried.

Dr. H. R. Storer rose to disclaim any intention of personality in the remarks made by him the day previous. As he had learned that Dr. Ray, of Rhode Island, intended to read the report of his Committee before the Association, he moved that he be made a member by invitation, and be requested to read his paper at 9 o'clock to-morrow morning.

Dr. Hibbard objected to departing from the rule of referring such papers to appropriate sections, as it would establish a precedent that might consume valuable time of the Association hereafter.

Dr. Walker, of Mass., in a few remarks defended the superintendents of Asylums for the Insane. He claimed that no discourtesy to the association was intended by those gentlemen. He explained that the reason why they did not unite with this organization was, that their duties and interests as hospital superintendents were different from those of ordinary physicians.

Dr. Gross hoped the report of Dr. Ray would not be referred, but be treated with the courtesy of a hearing in open session.

Dr. H. R. Storer again disclaimed any intention to give offence. He had endeavored to satisfy Dr. Walker of this, but he did not succeed.

The report of Dr. Ray was then made the special order for Thursday. at 9 a.m.

The Committee on nominations were instructed to meet in the Reception Room.

Dr. Atkinson proposed that the committee called for by Dr. Pinkney's resolution consist as follows:—Drs. N. S. Davis, Ill.; J. M. Toner, D.C.; S. D. Gross, Pa.; J. J. Cockerill, Md., H. F. Askew, Del. Carried.

The report of the Committee on Medical Education then came up pursuant to a previous resolution making it a special order.

Dr. Gross, as Chairman of the Committee on Medical Education, presented the report of the same, which was on motion referred to the Committee on Publication.

Dr. Stille followed with a summary of the proceedings of the Convention of Medical Teachers.

Dr. Davis, as Chairman of the Committee on Medical Instruction, then submitted his report. Referred to Committee on Publication.

Dr. Hughes took the Chair during the temporary absence of the President.

THE PRIZE ESSAYS.

The Committee on Prize Essays announced that eight essays had been presented in competition, and that the following were recommended as worthy of the award:—

1. On the Cause of Intermittent and Remittent Fevers. With the motto "Fortis est veritas."
2. On the Treatment of certain Abnormities of the Uterus. With

the motto, "Empiricism in Medicine and Surgery is fast giving away to the rationalism of true diagnosis."

The envelops, opened in the presence of the delegates, were found to contain the names of (1) Dr. J. D. Black, Newark, Ohio, for the first prize, and (2) Dr. M. A. Pallen, St. Louis, Mo., for the second prize.

The papers were, on motion, referred to the Committee of Publication.

Dr. Cox then read an abstract of the Report of the Committee on American Medical Necrology. Referred to Committee as above.

THE REPORT OF THE CONVENTION OF MEDICAL TEACHERS.

Dr. Sayre offered the subjoined:—

Resolved,—That this Association most cordially approve of the whole action of the Convention of Delegates from Medical Colleges, assembled in Cincinnati, May 3, 1867, and urge its practical adoption by all the medical colleges in our country.

Dr. Post, of New York, wished to offer some change in the course of instruction proposed.

Dr. Davis reminded him that the college to which he was attached had been invited to be present and take part in the proceedings of that Convention, but had not seen fit to do so. He could at the next meeting of that Association offer any amendment he chose, but he claimed that this body had no power to act in the matter.

Dr. C. A. Lee, of Buffalo, though not present at the Medical College Convention, approved of all that was done. He had for many years, as a teacher in a medical college, contemplated just such changes as had been recommended.

The resolution was then adopted.

Dr. Bibbins moved that the resolution abolishing the payment of money for prizes be taken up.

After an animated discussion, in which Drs. Davis, Bronson, Bibbins, and others participated, the original motion was tabled.

THE PROPOSED ANNUAL ASSESSMENT.

Dr. Toner moved, for present consideration, his resolution offered two years ago, calling for an amendment of the Constitution to the effect that every permanent member pay a yearly due of five dollars, and as a penalty for neglecting the same for three successive years, be liable to have his name designated by a * or † in the catalogue triennially published.

The motion, after considerable debate, was finally withdrawn.

Dr. Robbins, of Ill., submitted the following:—

Resolved,—That hereafter the Committee of Arrangement be directed to have the ordinances governing the sections printed on slips, and distributed at the several places where the sections meet. Carried.

Dr. Howard offered as follows:—

WHEREAS, There has been issued, and still remain in force, an official order from the Surgeon-General of the United States Army, prohibiting the communication of any medical or surgical information, by any medical officer of the United States Army, to any person whatsoever, without special permission from the Medical Bureau at Washington;

thus appropriating as far as the official power of Surgeon-General can compass it, all the valuable experience and statistics of all medical men who have served in the various departments of the United States Army to the exclusive use of the Medical Bureau; and,

WHEREAS, Under such arbitrary control an official report has already been made, tending to create incorrect impressions on scientific questions of great practical importance to the profession and to society; and,

WHEREAS, It is important to the reputation of all men who served during the war, that they have the opportunity of correcting such erroneous impressions by an examination of the original records; therefore, be it

Resolved,—That it is the opinion of this Association that the monopoly now exercised by the Medical Bureau over the medical and surgical records of the war, is contrary to the genius and catholic spirit of our profession, and obstructive to the highest interests of science and humanity.

Resolved,—That the Secretary of War, or other proper authorities, be requested to direct that the orginal records of the medical and surgical history of the war be rendered accessible, on certain regular days of each month, for purposes of scientific investigation, to all medical men who have served as such in the army of the United States.

Dr. Howard spoke at length in support of the resolution. He dwelt upon the jealousy of departments against interference on the part of outsiders. He did not aim at any one in particular, as a target; he spoke for the benefit of the profession.

Dr. J. S. Woodward replied that he was opposed to having gentlemen come here to ventilate their private griefs, at the expense of the valuable time of this learned body. Especially was he opposed to it, when the remedy sought for those griefs, whatever it may be, cannot be applied except at the expense of great public interests, now being earnestly and honestly administered by the Surgeon-General, an able and conscientious officer. Dropping therefore such minor matters, he proposed simply to explain certain reasons for the attitude of the Surgeon-General.

In the first place, those most anxious for premature access to these records are not those who have contributed most largely to them. Too often, indeed, they belong to men who might have contributed much but have contributed nothing, and who desire now to enjoy the fruits of the labors of others. It would be necessary to close the record against such men, even if no other reason for such a course existed. But, in the next place, it would be impossible to give such access to all outsiders who desire it, prior to publication, without gravely interfering with the scientific labors now in progress, and postponing, perhaps indefinitely, the publications now preparing.

It has not been said that it is not certain when any of this material will be given to the profession. As to that he was not prepared to say too much, but this he would say, although he did not come here intending to announce it, that in the course of the next two months the Surgeon-General will give to the public, as a first instalment of the labors he has undertaken for the good of the profession, an illustrated catalogue of the museum, which will contain about a thousand finely printed quarto pages, embracing, among other things, the histories of more than four thousand surgical cases of which we have specimens. (Great applause.) Other material will follow in due time; but for a work like this we need time. As regarded the correction of errors, the Surgeon-General had never opposed any obstacles whatever.

But there is another and still graver reason why the access asked cannot be granted. These records are not used for scientific puposes alone; they are employed in settling the pensions of the widows and orphans of our dead soldiers; and the bounty, back-pay, and pensions of the disabled; fifty searchers, as many as the nature of the records permit, are daily at work with them for this purpose; no outsider can be permitted to intrude, without gravely prejudicing this work, the execution of which is imperatively demanded by every consideration of humanity. When he left Washington there were about six thousand unanswered claims still upon this table. The question then before the Convention was simply this:—Shall further obstacles be interposed to delay a work now being honestly executed? He hoped, therefore, for the seal of the Association's condemnation upon this attempt to meddle with a conscientious public servant in the discharge of his duty. He would now move to lay these resolutions on the table. (Great applause.)

The motion to lay on the table was seconded and carried almost unanimously.

Dr. Cox presented advance proof-sheets of "Provisional Nomenclature of Disease," which was published in London. Referred to Section on Practical Medicine.

Also another, "On Compulsory Vaccination," by Dr. A. N. Bell, of Brooklyn, N.Y., was presented by deputy, and, on motion, referred to the Committee on Hygiene.

Dr. Hammar offered a series of resolutions regarding certain proposed reforms in medical pupilage. Referred to Committee on Medical Education.

Dr. R. H. Gilbert, of New York, exhibited an instrument for the protection of the periosteum in excisions, etc. Referred to Section on Surgery.

Dr. Post read the Report of the Committee on Medical Literature, in which he gave certain bibliographical items, referring to reports, etc.

Dr. Sayre criticised certain portions of the report as being too highly laudatory of the Board of Health of New York, and as containing matter foreign to the scope of such a production. He also made some remarks upon cholera and quarantine, and claimed that there were few if any cases of that disease to combat, and that these same had been introduced by breakages of the quarantine.

Dr. Davis supported the spirit of the Committee's report, and moved that it take the usual course of reference to the Committee on Publication, which was adopted.

Dr. Hibbard offered the following:—

Resolved,—That the habit of using unofficinal preparations of medicine by physicians, except where there is no officinal preparation that will answer the purpose as well, is unscientific and imprudent, tending to demoralize the therapeutist and to encourage irregular pharmaceutists and nostrum makers, and should be abandoned.

Resolved,—That the profession should not patronize druggists who are engaged in the manufacture of nostrums.

On motion, tabled.

The following papers, in the course of the meeting, were read by title, and disposed of as follows:—

Observations on Diseases of the Throat, as seen in the Military Service from 1861 to 1865, by Prof. M. K. Taylor, M.D. Referred to Section on Practical Medicine and Obstetrics.

A Novel Case of Lithotomy, by Dr. Edward Whinnery, of Iowa.

On ligature of the Subclavian Artery, by Dr. Willard Parker, of New York.

Also, on Hip-joint Operations, by Dr. Paul F. Eve, of Tennessee. All referred to Section on Surgery,

On Compulsory Vaccination, by Dr. A. N. Bell. Referred to Committee on Meteorology, Medical Topography, and Epidemic Diseases.

The Secretary read an authenticated communication from the Chicago Medical Society, announcing the expulsion of Dr. Jonathan Brooks and Dr. N. Peterson from aforesaid body for violation of the Code of Medical Ethics. The names in question were ordered to be dropped from the roll of the American Medical Association.

A communication proposing that no person who is not a member and supporter of a local Medical Society, where such a one exists, shall be eligible to membership in the American Medical Association was, on motion, laid over until the next year, as duly provided for by the Constitution.

The Association then adjourned until 9 o'clock the following morning.

THIRD DAY—MORNING SESSION.

THURSDAY, MAY 9, 1867.

Dr. H. F. Askew, President, in the Chair.

The Association met at 9 o'clock, pursuant to adjournment.

Dr. D. H. Storer, of Mass., moved that a recess of five minutes be granted before the reading of Dr. Ray's paper, which had been set down as the order of the day. Carried.

Dr. D. H. Storer then proposed that, inasmuch as the Treasury of the Association was somewhat in debt, a sufficient sum be raised at the present meeting to put it into a better financial condition.

A motion to levy an assessment of two dollars upon each member, with the understanding that the contribution should be voluntary, was made.

Dr. C. A. Lee stated that he proposed the same method last year, and was most happy to second it.

Dr. Davis, of Illinois, offered the following:—

Resolved,—That Dr. D. H. Storer be requested to draw up a subscription paper, and place it in a suitable locality, accessible to the members and that all present be asked to subscribe such amount as they feel disposed for the purpose of liquidating the indebtedness of the Association and replenshing its treasury. Adopted.

FEMALE MEDICAL EDUCATION.

Dr. Atlee, of Philadelphia, offered the following preamble and resolutions:—

Whereas, The subject of female medical education is exciting attention, and regularly educated female physicians have established themselves as practitioners of medicine; and,

Whereas, Female medical colleges, embracing all branches taught in other colleges, and all their conditions for graduation, exist in the United States for the separate education of females; and,

Whereas, It is important that the standard of education and the observance of the code of medical ethics should be fostered and maintained by this Association, therefore;

Resolved,—That the American Medical Association recognize well-educated female physicians by the same laws that govern its own members,

Dr. Bowditch rose to a point of order. He reminded the President that the five minutes' recess had just expired, and would, therefore, move to lay the whole matter on the table. Carried.

REPORT OF COMMITTEE ON INSANITY.

Dr. Clement A. Walker, of Massachusetts, apologized for the absence of Dr. Ray, and stated that the precarious condition of Dr. R's health had compelled him to resign his position as Superintendent of the Asylum. He then read the Report of the Committee on Insanity. He combatted many of the popular notions and even the professional theories on the subject. He alluded to the law of hereditary transmission, and maintained that insanity was controlled by some law of normal limitation, oftentimes requiring only an exciting cause.

Hereditary disease must have had its origin at some time, that it seldom passes through all its stages in a single individual. More than one generation is required to develop *all* the stages of the disease. The essential thing is nervous impairment. Cerebral vitiation, self-induced, strong distracted nervous irritation during pregnancy, are heritable. *All* the traits of one parent, however, cannot be expected to descend to any single individual of his offspring. Insanity is not therefore an unmitigated evil, not amenable to treatment. Recent investigations have developed the fact that the obscurer forms of the malady were never previously recognized. The throwing of the veil of insanity over human delinquencies as a legal defence, has long stood in the way of dispassionate investigation. Popular prejudice may defer the verdict but cannot affect the truth of science. He scouted the idea that the students of insanity, by a strange perversity, gradually come to consider that all are more or less insane. So then, the more thorough the investigation the more fallacious the conclusions!

Monomania was not recognized until the present century. Moral perversion is an accident, not a necessary accompaniment of the malady. Considering the brain as the material instrument of the mind, it of course is subject to the operation of physical and extrinsic causes.

Insanity has no essential feature common to every case, but the people will not accept this axiom because it conflicts with old opinions. No metaphysical subtlety is, however, to be pitted against the deduction of common sense. Responsibility is an available plea only in disease, because in health the mind is also healthy.

Moral Insanity is therefore something more than mere fiction.

As regards treatment, not to mention the various methods of purgation, emesis, etc., the most dangerous was founded on the theory that insanity was essentially inflammatory. He denounced the other modes of physical assault, powerful mental shocks, etc., and eulogized the more rational treatment of cheerful surroundings, etc.

Dr. H. R. Storer moved the acceptance of the report and its reference to the Committee of Publication. Carried.

Dr. Chipley, of Lexington, Ky., offered some remarks in vindication of the Superintendents of Insane Asylums, with reference to their connection with this Association. He alluded to the fact that there were five such Superintendents present, who were a larger proportion of their class than the representatives of any other class of the medical profession present. Regarding the allegation that a proper verdict could not be rendered except by the Superintendents, he would inquire whether all questions of trade were not referred to its own particular class.

During his speech Dr. Chipley paid a glowing tribute to the services of Miss Dix, who had done so much for the insane of the country.

The Committee on Nominations made the following report:—

Place of meeting next year—New Orleans. Time—May.

OFFICERS FOR 1868.

President—Samuel D. Gross, Penn.

Vice-Presidents—1st, A. C. Post, N.Y.; 2d, John Atlee, Penn.; 3d, D. W. Yandell, Ky.; 4th, H. R. Storer, Mass.

Permanent Secretary, W. B. Atkinson, Philadelphia, Penn.

Assistant Secretary—J. G. Richardson, New Orleans.

Treasurer—Caspar Wistar, Philadelphia, Penn.

Committee of Arrangements—W. Storer, Warren Bricknell, S. Chapin, John Foster, L. T. Pimm, S. M. Berniss, and C. Beard, all of New Orleans.

Committee on Medical Associations—H. B. Palmer, Mich.; W. H. Byford, Ill.; M. L. Linton, Mo.; Gustave C. E. Weber, Ohio; H. R. Storer, Mass.

The Committee on Medical Necrology was continued, with the following changes to supply vacancies:—

John Shrady, N.Y.; J. M. Toner, D.C.; Thomas L. Doran, Cal.; A. G. Field, Iowa; H. F. Askew, Del.

Committee on Medical Literature—Geo. Mendenhall, R. R. McIlvain, Geo. C. Blackman, E. Williams, C. S. Connor, all of Cincinnati.

Epidemics and Climatology—W. F. Thoms, N.Y.; J. W. Hatch, Cal.; Joseph Jones, Tenn.; T. J. Heard, Texas; and E. K. Hart, Conn.—substituted for Dr. B. H. Catlin.

Committee on Prize Essays—Bennett Dowler, S. A. Smith, W. Brickell, S. M. Bemiss, J. Scott, all of New Orleans.

Committee on Publication—F. G. Smith, Caspar Wistar, W. B. Atkinson, W. Maybury, all of Pennsylvania; H. F. Askew, Delaware; H. R. Storer, Mass., and W. W. Dawson, Ohio.

Delegates to International Medical Congress—Drs. Paul F. Eve, Edmund Andrews, C. E. Brown-Sequard, Thomas M. Logan, R. R. McIlvain, John M. Kitchin, B. Fordyce Barker, Thos. C. Brinsmade, John E. Tyler, J. M. Toner, and Louis Elsberg.

The Committee recommended the adoption of the following:—

Resolved,—That the Committee suggest to the Association that, in future, the Publishing Committee be requested to publish the name of every member of each standing committee.

A motion that the report lay on the table until that of the minority of the Committee was read, was declared lost.

Dr. Davis moved that the report of the committee be accepted, and their resolution be adopted. Carried.

Dr. Bibbins, of N.Y., asked the reason why New Orleans was named, and whether or not any delegate from Louisiana was present?

Dr. Davis moved that the portion referring to the proposed place of meeting, together with the special local committees and local secretary, be laid on the table. Carried.

The report of the Nominating Committee, with the exceptions indicated, was then adopted.

Dr. Davis then called up the part of the report regarding the place of meeting, and again protested against New Orleans, on various grounds. He presented the following:—

Resolved,—That the next annual meeting of the American Medical Association shall be held in the City of Washington on the first Tuesday in May, 1868, and every second year thereafter, until otherwise ordered by the Association.

Resolved,—That whenever the Association shall meet in the City of Washington, as directed in the above resolution, the Committee of Arrangements be strictly forbidden either to provide themselves, or accept provision by others, of any entertainment or excursion whatever.

Dr. Yandell, of Ky., spoke eloquently in behalf of the profession which no war had ever yet disunited, and claimed for his brethren of the south the privilege of entertaining the Association.

Dr. Griswold, of Ohio, moved the substitution of Knoxville, Tenn., for Washington, D.C.

Dr. Sayre moved to substitute New Orleans, as in the original report. He thought that, with Dr. Davis's resolution of restriction as to entertainments, there would be no objection to that place.

Dr. Cox endorsed all that had been said by his friend from Kentucky, was proud that one man from the South had expressed himself as standing on the platform of the union of the medical profession. He never supposed there would be any difficulty in reuniting the profession of medicine after the war was over. As to the entertainments of the Association, he was in favor of them, and thought if Dr. Davis measure was adopted the usefulness and attendance of the Association would be impaired. In England they did far more eating and drinking than was done here, and yet they accomplished a large amount of work.

Dr. D. H. Storer, of Boston, said the object of these meetings was to bring as many of the profession together as possible, and it should meet in such places as would accomplish that object. We should not meet where we have not been invited by resident members. The probability was, we would be well received, but we ought to wait for a proper invitation.

A motion to postpone the discussion until the next Session prevailed, after which the Association adjourned to meet at 3 p.m.

AFTERNOON SESSION.

The Association met and adjourned, there being no quorum present.

FOURTH DAY.

FRIDAY, May 18, 1867.

Dr. H. F. Askew, President, in the chair.

Drs. J. D. Staebler, J. P. Walker, and P. F. Maley, of Cincinnatti, Ohio; Dr. G. M. Kellogg, of Keokuk, Iowa; Dr. A. J. Larey, of Mount Pleasant, Kansas; Dr. Wm. Marsden, of Quebec; Dr. John Dillard, of Lexington, Kentucky; Drs. S. S. Gray, and A. S. Ashton, of Piqua, Ohio, were made members of the Association by invitation.

THE CASE OF DR. HINKLE.

A delegate presented papers involving charges against Dr. Hinkle, and asked that his name be stricken from the roll of members.

Dr. Atkinson, in presenting Dr. Hinkle's defence, moved a reference of the whole matter to the Committee of Medical Ethics.

The chair ruled that the reference was out of order, and decided that Dr. Hinkle's name be erased.

ADDITIONAL DELEGATES TO INTERNATIONAL CONGRESS.

The following were, on motion, elected additional delegates to the International Medical Congress, to be held in Paris next August. : Drs. Wilson Jewell, of Pennsylvania; Ninian Pinkney, U.S.N.; John Hart, of New York; and Charles A. Pope of Missouri.

Dr. Hibbard, of Illinois, then presented the following, which was carried:—

Whereas, It has been officially announced that for the last two years the annual volume of Transactions of this Association could be published only by the members of the Publication Committee becoming individually responsible for the cost of the same above the amount of funds in the treasury; and,

Whereas, Such a condition of affairs is impolitic for the Association and unjust for the Committee; therefore,

Resolved,—That the Association does not expect the Committee on

Publication to issue the volume of Transactions for the present year, unless it can be done with the funds and credit of the Association.

Dr. Hildreth submitted a resolution:—

"That a Committee on Opthalmology be appointed to report at the next Session." Adopted.

Drs. Joseph S. Hildreth, of Chicago, Illinois; Henry D. Noyes, and Cornelius R. Agnew, of New York, were appointed said Committee.

THE NEXT PLACE OF MEETING TO BE WASINGTON, D.C.

Dr. Davis's resolutions regarding the next place of meeting, &c., were then ordered from the table.

Dr. Hammar suggested St. Louis, Mo., as having favorable claims for the consideration of the Association.

After a lively debate, during which several amendments to the original resolution were entertained, the motion finally prevailed in the following form:—

Resolved, That the next annual meeting of the American Medical Association shall be held in the city of Washington on the first Tuesday in May, 1868, and every second year thereafter, until otherwise ordered by the Association.

Resolved,—That whenever the Association shall meet in the city of Washington, or elsewhere, as directed in the above resolution, the Committee of Arrangements be strictly forbidden either to provide themselves, or accept provision by others, of any entertainment or excursion whatever, which will conflict with the regular business of the body or its Sections.

CULTIVATION OF THE CINCHONA TREE.

Dr. Atkinson read a communication from Dr. Henry F. Lyster, Secretary of the Wayne Co. (Mich.) Medical Society, requesting that some action be taken by the American Medical Association regarding the "Introduction of the cinchona tree in the United States." For the sake of giving form to the discussion, he presented the subjoined:—

Rsolved,—That a committee of three be appointed by the chair, whose duty shall be to memorialize Congress relative to the cultivation of the Cinchona tree. Carried.

Drs. J. M. Toner and F. Howard, of Washington, D. C.; and Dr. C. A. Lee, of Poughkeepsie, N.Y., were appointed said Committee.

Dr. Atkinson read by title a paper from Dr. E. Harris, of N.Y., upon the Causes of Cholera. Also another by Dr. E. Krackowizer, on Local Anæsthesia.

Dr. Davis, in view of the fact that the hour of adjournment was rapidly approaching, offered a resolution which he thought would meet all objections:—

Resolved,—That such papers and reports as the several Sections have not been able to act upon, be referred to a special Committee of three to examine and act upon in all respects as is required in the proper Sections. Carried.

The Committee as appointed consisted of Drs. N. S. Davis, D. H. Storer, and C. A. Lee.

Dr. Harris's and Krackowizer's papers were then, on motion, referred to said Committee.

Dr. Atkinson read by title Synopsis of an Essay on the Contagion, Infection, Portability, and Communicatibility of the Asiatic Cholera in its relations to Quarantine, with a brief history of its origin and course in Canada, from 1832. By Wm. Marsden, M.D.

Dr. Marsden made a few remarks in explanation of the objects, etc., of the paper.

Dr. Sayre moved to refer the paper to the Committee of Publication. Carried.

ALTERATIONS IN THE PLAN OF ORGANIZATION.

The following was offered by Dr. Cox, of Maryland :—

Resolved,—That a Committee of five be appointed by the Chair to take into consideration such amendments or alterations in the plan of organization of this Association, and to remedy defects, if any, and increase its efficiency, and report at the meeting in 1868. Adopted.

Drs. C. C. Cox, J. M. Toner, W. B. Atkinson, J. J. Woodward, and John Shrady, were appointed in accordance with the above.

Dr. Davis moved that the resolution referring Dr. Marsden's paper to the Committee of Publication be reconsidered. Carried.

The motion to refer said paper to the special committee as previously provided, was then carried.

Dr. B. Howard, of N.Y., owing to the absence of the Secretary, read the report of the Surgical Section, which, after some corrections, was accepted.

CHOLERA AND QUARANTINE.

Dr. Charles A. Lee of New York, then submitted these resolutions, bearing upon the subject of Cholera, which were adopted as the sense of the Convention :—

Whereas, It was declared by a vote of Congress at its last session, that it is not within the Constitutional powers of the General Government to establish a general and uniform system of quarantine for the different ports of the United States; and, whereas, the cholera infection has been introduced into the United States, and did doubtless monifest itself in many of the cities, towns, and villages of our country during the present season; and,

Whereas, The experience of the city of New York and other places, both at home and abroad, has demonstrated the efficacy of certain chemical disinfectants, especially *carbolic acid* and the *sulphate of iron*, in destroying or preventing the spread of cholera *virus*, it is hereby, as as urgently recommended by this Association, that the attention of physicians of the United States be chiefly and constantly directed to the prompt and free use of such disinfectants wherever the cholera poison may show itself,—

Resolved,—That as the experience of Europe and the United States has satisfactorily shown that the cholera poison cannot be controlled or kept in check except where the *cordons sanitaries* are absolutely prohibitory of all intercourse, as was the case in the entire Island of Sicily and the entire coasts and frontier of Greece, during the recent cholera epidemic; and

Whereas, There is good reason to believe that the people of the

United States would not submit to the enforcement of such prohibitory measures and non-intercourse as is necessary to hold the cholera poison in check, especially after its introduction into the country, it is hereby recommended to all municipal bodies and Boards of Health to pay special attention to requisite sanitary measures, such as the cleansing of streets, lanes and alleys; the supply of pure drinking water to the inhabitants; the ample provision of chemical disinfectants, and their prompt employment in necessary cases; the separation of the sick from the healthy, in the same dwelling; the inspection and regulation of tenement houses; the provision of nurses, hospitals, and competent physicians for the sick poor, who may be attacked; provision for the early burials of the dead; the separation of the corpses from the living; the prohibition of the custom of waking the dead, and all other measures which have been found necessary to control the progress of the disease—

Resolved,—That experience proves that the publication of the facts connected with the existence and progress of cholera in any place, instead of disturbing the popular mind, while it reveals the exact extent of the danger, robs it of the hold of alarm and fear, with which the imagination surrounds indefinite pestilence, walking abroad by noonday.

Dr. H. R. Storer read the minutes of the Section on Psychology, which were, on motion, referred to the Committee of Publication.

The reports of the Section on Practical Medicine, and on Meteorology, were read and disposed of in like manner.

The Committee on Nominations submitted their report as amended. The changes are:—

Committee of Arrangements—Drs. Grafton Tyler, chairman; William P. Johnson, F. Howard, William Maybury, Lewis Mackall, T. F. Many, J. M. Toner; Assistant Secretary, J. W. H, Lovejoy. Added to Committee on Necrology, Dr. Samuel Willey, of Minnesota; and Dr. Samuel M. Welch of Galveston, Texas.

REMUNERATION OF PERMANENT SECRETARY.

Dr. M. A. Pallen presented the subjoined:—

Whereas, It was the intention of the resolution originally introduced creating the office of Permanent Secretary, to pay said officer a certain sum annually, as a salary for services as such; and, whereas, Dr. William B. Atkinson, our present efficient and urbane Secretary, has never received any money whatsoever in payment of said services, therefore,

Be it resolved, that the Permanent Secretary hereafter, and from this date, be authorized to draw a warrant upon the Treasurer for the expenses incurred in his attending each session of the Association, and that the Treasurer is hereby instructed to pay the same.

Unanimously adopted.

Dr. Atlee moved that the thanks of the Association be tendered to the Permanent Secretary, for past services. Carried.

THE ANNUAL ASSESSMENT AGAIN.

Dr. Toner proposed the following, which includes an article of the Constitution with the amendments added:—The sum of five dollars shall be assessed annually upon each delegate to the Sessions of the

Association, as well as upon each of its permanent members, whether attending or not, for the purpose of raising a fund to defray the *necessary* expenses of the Association, and for printing the Transactions. The payment of this assessment shall be required of the delegates and members in attendance upon the Sessions of the Association previously to their taking seats and participating in the business of the session. Permanent members not attending, shall forward their yearly dues to the Treasurer, and thereby shall be entitled to receive a copy of the printed Transactions, the same as delagates. Referred, after an animated debate, to Committee on Revision of Constitution and By-Laws.

Dr. Hibbard asked that Dr. H. R. Storer be permitted to use, in the preparation of a paper, certain matter previously presented by himself to the Association. Permission granted.

Votes of thanks to various railroad companies, and others, for courtesies extended the Association, were then passed.

Dr. Hibbard's resolutions, regarding the use of unofficinal preparations, and the relations between the profession and the venders of nostrums, were then called up.

Dr. Post called attention to the proper distinction between the terms "unofficinal" and "magisterial."

Dr. Cox, as an amendment, desired to insert after *manufacturing*, the words, "advertising or selling quack medicines or nostrums." Lost.

Dr. Bibbins moved the reference of the whole subject to the Committee on Revision of the Constiution, etc. Carried.

FEMALE EDUCATION AGAIN.

Dr. Atlee then pressed his his resolutions on the subject of Female Education. A motion to take them from the table was carried by a vote of 56 to 52.

Dr. Pallen, of Missouri, was opposed to the discussion of the subject. Women were not by nature fitted for the practice of medicine. It had been tried in Europe, and had proved an utter failure. Ladies possessed of any delicacy could not acquire the proper amount of knowledge. Imagine a young lady, with gigantic chignon and garbed in silks, entering the charnel-house, and bending over a corpse, microscope in hand, searching for cancer cells, etc., etc.

Dr. Davis thought the discussion of this subject, at this time would only furnish newspaper gossips with a subject, and could do no possible good. He therefore moved to refer the whole subject to the Committee on Medical Ethics.

Dr. Bowditch, of Mass., was opposed to this way of disposing of such an important matter. He had moved yesterday to lay the resolutions on the table, simply because he thought the Convention was not prepared to act upon them. The question had nothing to do with the laws of nature, or the manner in which ladies were to acquire the proper amount of knowledge. The question was simply whether or not they should be recognised when they *had* acquired that knowledge, as many of them undoubtedly had.

The Doctor mentioned several instances in which the practice of medicine by lady physicians had been attended with great success.

Dr. Davis's motion to refer to Committee on Medical Ethics was carried by a large majority.

Dr. Hibbard moved that Dr. Theophilus Parvin, of indiana, be appointed to render a special report on the Surgical Diseases of Women at the next annual meeting. Adopted.

A vote of thanks was tendered Mr. F. Hopkins for free use of his Hall.

A communication from Dr. J. Homberger, expressing his desire to resign from the Association, was received, and finally referred to Committee on Medical Ethics.

After a resolution, offered by Dr. S. C. Hughes, thanking the Press for impartial reports of the proceedings, Dr. C. A. Lee read the following:—

THE PROVISION FOR CHRONIC INSANE.

Resolved,—That providing for the poor chronic insane in the jails and almshouses of our country, as at present practiced in nearly all the States of the Union, is a gross violation of the laws of humanity, and contrary to the Divine injunction of "doing to others as we would be be done by."

Resolved,—That where the regular hospitals for the insane of a State are insufficient to accommodate both acute and chronic cases that are sent to them, this Association would strongly recommend the procurement of a suitable amount of land in the vicinity, and the erection of convenient, well-planned, and well-ventilated, but comparatively inexpensive buildings, in connection with and under the general supervision as the hospitals themselves, where those who are able to labor, and would be benefitted by light and regulated employment, may be suitably accommodated and properly cared for.

Resolved,—That the example of Massachusetts in establishing asylums for the accommodation and humane treatment of the chronic insane, is worthy of all praise and imitation, and in the opinion of this Association, such institutions, if rightly inaugurated and judiciously carried on, will be a benefit to the State in an economical point of view, will raise the character of the State hospitals, and will greatly subserve the interests of the insane generally.

Resolved,—That as the present insane hospitals are capable of accommodating but a small proportion of the 40,000 insane of the United States, and as almshouse and jail provision is not adapted to their proper care and treatment, this Association would recommend to the proper State authorities, to make such further provision in the direction above indicated as may tend to the amelioration of their condition, if not the restoration of their rational and moral faculties. Adopted.

Dr. Bibbins moved to refer to a Special Committee of five, to report to the next annual meeting. Carried.

Dr. C. A. Lee, N.Y; Dr. Guntry, Ohio; Dr. John Fonerdin; Dr. Walker, Mass.; Dr. Chipley, Ky.; were appointed said Committee.

Dr. Cox submitted the below-named resolutions, which were unanimously adopted:—

THE LATE SURGEON C. S. TRIPLER, U.S.A.

Resolved,—That in the loss of Surgeon Charles S. Tripler, U.S.A., who died in this city since the last meeting of the Association, the profession throughout the country, the army of the United States, and the Society especially, have experienced a serious loss.

Resolved,—That in the high moral integrity, Christian character, professional ability and conscientious love of his vocation, we recognise in Dr. Tripler one of the truest illustrations of a sound physicians and a good man.

Resolved,—That the condolence and sympathies of this Association are hereby tendered to the family and relations of the deceased; and the Secretary is directed to communicate to them a copy of these resolutions.

Dr. Davis moved that the Committee charged with procuring suitable accommodations for the Association meetings in the Smithsonian Institution, in Washington, D.C., be continued. Carried.

Dr. Alden March, of New York, offered the following :—

Resolved,—That the thanks of the Association are due, and are hereby tendered to, the President and retiring officers for the ability, impartiality, and courtesy manifested in the discharged of their arduous duties. Carried.

Dr. Cox moved that surplus copies of the Transactions of the Associations not yet out of print, be sent to the Secretaries of similar organizations in exchange for the volumes published by their own bodied. Carried.

Dr. Hughes presented the following :—

Resolved,—That those members of the Association who have contributed to the amount of five dollars to the publishing of future Transactions, shall be entitled to any back volume of the Transactions to the amount of same, as they may want. Carried.

After the passage of several votes of thanks the meeting adjourned at two p.m., to meet at the time and place previously designated.

Books, Pamphlets and Journals Received.

JOURNALS REGULARLY RECEIVED:

American Journal of Dental Science, Baltimore; May and June.
American Naturalist, Salem, Mass.
Atlanta Medical and Surgical Journal.
Boston Medical and Surgical Journal.
Buffalo Medical and Surgical Journal.
Braithwaite's Retrospect.
Detroit Review.
Medical and Surgical Reporter, Philadelphia.
Medical News and Library, May and June.
New York Medical Journal, May and June.
Nashville Journal of Medicine and Surgery.
Richmond Medical Journal.
Southern Medical and Surgical Journal.
Southern Journal of the Medical Sciences.
St. Louis Medical and Surgical Journal.
The Medical Record, New York.
The Medical Reporter, St. Louis.
The Dental Cosmos.
University Journal of Medicine and Surgery.
Zeitschrift fur Practische. Heilkunde.
The American Journal of Medical Science, Philadelphia, new series.
Phrenological Journal, N. York.
The Druggist's Circular.
Chicago Medical Examiner, June.
Chicago Medical Journal, June.
The Agriculturalist, N. York.
The Eclectic Journal of Medicine.
The Medical Investigator.

METEOROLOGICAL TABLE FOR APRIL, 1865, AT HOUSTON.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SNU. RISE.	1-3 MP	SUN.. SET..	MEAN THER.	CLOUDS.		RAINS, FOGS, &c.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P. M.	A. M.	P. M.	NIGHT.
Sat...	1	10..16..	15.12.09	30.13	NE1-2	SE2-4..S2-5..S1-3	52	80	69	67	ci3....cccuci3	ccccicu5cudci8cidci4			
	2	03..05..	97.82.89	29.97	NE1-3	S2-4...S2-4..S1-3	58	70	68	65	cicc5 ...ccci5	cicc2....cicc2....ci5		spr	
Mon..	3	88....92	..84..83	29.88	S0-1....S1-2	S1-3...S1-3..S1-2	64	86	73	74	cccc7....cucc9	cidcicc5..cidci7..ci8			
Tues.	4	83....86	..82..81	29.83	SE1 3....S2-4	S2-4...S1-3 S1-3	68	83	72	74	ccci9....cc10	dcicc8.dcicc7..cidci4	slight spr..		R
Wed..	5	76..79..	74.73.66	29.81	n10....ncc10	S2-4...S2-4..S1-3	69	73	71	71	n10....n10	ccci5...cicc8...cicc5	spr	R -- — —	
Thurs	6	93....03	..01. 03	29.76	0....S2-5	S2.4...S2-4..S1-3	69	68	66	68	0....... ci1	cidcicc7 ci4.dcicistr7	spr. .R		spr
Fri...	7	16....22	..17..17	30.98	SE1-2....S2-5	SE2-4.SE2-4. S1-3	57	60	53	57	0........cicc1	ccci6.....cc8....cc9	spr	spr.R	ths
Sat...	8	09..15..	12.03.99	30.19	S1-3....S2-4,	SW2-4W1-3N0-1.S	49	55	55	53	cc8....ccci5	ccci5....ccci2. .cc4	....spr	misting	R
	9	98....98	..93..92	29.07	S1-3....S2-4	S2-4W2-4S2-4 S1-4	56	75	72	68	ccdcistr7....cc10	0........0........0	spr.R.ths..		
Mon..	10	92..95..	86.92.84	29.96	S1-3....S2-3	S1-2...S2-4..S2-4	67	72	70	69	ccs3....cc6	ci1....ci5 . .dcici9		R	
Tues.	11	77..84..	82.78.77	29.90	S1-2N1-2 W1-2.SW	S2-4...S2-4..S1-3	69	77	73	73	ccci4....cccu10	cccu6....cucc7. cc3	....spr	R....R	R
Wed..	12	83. 84..	85.84.87	29.80	N2-4....N2-5	E2-4....E2-4...0	71	75	67	71	cc9....ncc10	cccu10 ccdci9 dcicc10	....spr		
Thurs	13	04..18..	16.13.12	30.85	0....S1-3	N1-4 ....N1-4..0	59	72	66	66	ccn9....ccu10	ncc10..cccu8..cucc3	....spr	spr	
Fri...	14	03..06..	04.00.98	30.11	0....W1-3	SE1-4.SE2-4.SE1-3	63	75	73	70	n10....cc7	cc10....cc10.....cc9	shr. R		
Sat...	15	04..10..	..06..08	30.02	0....SW1-2	SE2-5.W3-6.NE1-2	71	86	81	76	ccdci6 ...cccu5	cucc9..cucc8....n10	R		
	16	14..19..	17.15.12	30.17	0....W1-3	S1-3....S1-2	65	81	74	73	0......0	cc2........0........0	fog		
Mon..	17	02030004	97.96.98	30.16	0....S1-3	SE1-4....S2-5	69	81	76	75	0 ...ci1	0..........0......ci1			
Tues.	18	02..08..	05.96.98	30.00	0....SE13	NW3-5.N2-4.W1-3	71	76	73	73	cistr3....cicc3	ci2.......ci1......ci1			ths
Wed.,	19	84..93..	91.86.85	29.03	SE1-2....S2-4	S1-2. SW1-2..S0-1	65	77	75	72	dciccs6....ccci8	cidci3....ci3.....ci4	R ths	ths to W &N	
Thurs	20	79857883	..76..80	29.88	0....S1-3	S3-5...S2-5..S2-4	73	79	77	76	cc3....cc3	ccdci8.. dcici7...cc8	....spr	spr	
Fri...	21	05..14..	13.14.14	30.80	0....S1-3	S2-5...S2-4..S2-4	45	65	60	60	....cccu6	cccu3.. cucc2....cc1	spr..spr		
Sat...	22	25..29..	27.25.26	30.10	0....S1-3	S1-3...S2-4..S2-4	44	67	51	54	cc7....cc4	cucc8....cucc2.. cc1			
	23	23....39	..31..30	30.27	0....S2-4	S2-5...S3-5..S2-4	44	72	67	61	cc6....cucc7	cucc8.... cucc2....0			
Mon..	24	34..40..	37.32.30	30.34	0....S1-3	S2-5...S3-5..S2-4	48	73	65	62	ccs5....cucc7	cucc5....ccci3...cc1			
Tues.	25	27....29	..24..19	30.35	0....S1-3	W2-4..W2-5 .N2-5	53	72	67	64	... ccci2	cucc5..cucc4 .custr2			R
Wed..	26	09..15..	05.03.99	30.24	0....W1-3...S2-4	NW2-4. NW2-4..0	60	64	63	62	fcc10....ci1	cc5......cc2.....cu1		R 0-13	R— — — —
Thurs	27	91..94..	93.87.88	29.07	NE0.1....S2-4	S1-3N1-3N1-3.NW	63	79	74	72	ci2....cccicu8	cucc6.....cc2......0	R — — —		
Fri...	28	95..04..	04.00.00	30.90	0....E1-3	S1-2...S1-3..S1-3	66	80	73	73	custr2....cu5	cuci6.. .cicc4... ci2	R		
Sat...	29	06.10.12	..07..05	30.00	N1-3....N2-5	S1-3...S1-3..S1-3	68	81	74	74	fc7....ccci4	dcicu9dcicucc8cistr4			
	30	95..06..	03.97.97	30.07	0....NE1-3	SE1-3.SE2-4..S1-2	68	83	78	77	custr2....cc9....ci1	cucc7...cucc4....ci1			
					Force of wind	as 2.83 is to 10.					Amount of clouds	as 7.08 is to 10.			

Max. range 30.'40; min. 29.'73. 30.'02.43 mean; max 88°43.

General Remarks.—5th—9 a.m to 6 p.m. more misty than rainy. 6th—9 a.m., ther. at 62°. 9th—Locust trees partially in blossom; strawberries in market.

METEOROLOGICAL TABLE FOR MAY, 1865. AT HOUSTON.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SUN RISE.	1-3P.M.	SUN SET.	MEAN THER	CLOUDS.		RAINS, FOGS, &C.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P. M.	A. M.	P. M.	NIGHT.
Mon..	1	05..09..	08.04.03	30.06	N0-1....E1-3....	s1-2..s1-2..s0-1	62	79	76	72	ccs3....cucc5.......	cucc8...cuci4...ccs2	....	....	....
Tues.	2	04.10.12	..07..06	30.07	0....E1-3....s2-4	w2-4...w2-4...0	60	85	77	74	ccci5....cicccu4....	cccu3. ccci2.. ccstr2	fog..light...	....	....
Wed..	3	09..14..	12.09.09	30.01	E1-3.....SE1-4....	s2-3...s2-4.. s1-3	64	84	75	74	ccs2....cu5........	cicccu3cicu3cccustr4	....	....	....
Thurs	4	10..13..	19.07.06	30.10	s3-4....s1-2......	s2-5...s2-5...s2-5	67	87	75	76	cucc3....cucc5.....	cucc7.. cucc....3cu1	....	....	....
Fri...	5	05..06..	01.02.98	30.02	0....E1-2........	N0-1. w1-2..w2-4	67	87	75	76	cu1....cu6..........	cucc5...cucc5....cc1	....	....	....
Sat...	6	95..96..	97.97.96	29.97	0....E1-3..........	......s1-3....s1-3	72	67	66	68	cu2....cucc7.........	cucc10.cicu7..cicc8	th.ths.R0 30	R ——0.02	....
	7	96..96..	92.84.86	29.97	0....SE2-4........	s3-5..s2-5...s2-4	60	75	70	68	ci2....cuci2.........	cc9....cc9. cccistr7	shr.	sp·.ths to S	ths to NE..
Mon..	8	76.82.89	79.77.79	29.79	0....SE3 4.......	s2-5..s2-4...s2-5	59	81	76	72	cicu2.......cidcistr4	cccu5...cuci5 ...cc2	spr.	....	....
Tues.	9	77..82..	80.77.74	29.78	0....s1-2.........	E1-3..s1-3...s1-2	67	87	74	76	cc10....ncc10.......	cccistr1....cc2.....	....	....	....
Wed..	10	78..84..	86.85.87	29.82	0....E1-3..........	E1-4.NE1-3..N0-1	71	88	78	79	cistr2....cicc3......	cc10....ccn10..ccs10	....	....	R light....
Thurs	11	06..09..	08.05 06	30.07	E1-2.... E2-4....	NE1-4..E2-4....0	54	74	70	66	cistr2....cc2........	ci6..cicc8....ccstr10	....	....	....
Fri...	12	07..09..	06.02.90	30.04	0....E1-3..........	SE2-4....... s1-3	53	74	72	66	cicc2....ci2.........	n10...ccc10... ncc10	....	....	....
Sat...	13	99..04..	02.98.96	30.00	0....NE1-2........	SE2-4.SE2-4.SE1-3	54	80	72	67	ccs2....dcici2.......	ncc10. ncc10..ncc10	....	....	....
	14	94....04	..03..00	29.99	0....s1-3..........	SE1-3..s1-3..s1-2	68	81	75	74	... cucc8...	....cucc4.....cistr7	..........spr.	....	...R....R
Mon..	15	05..09..	09.09.08	30.07	0....s1-3..........	s1-2..s2-4...s1-2	73	83	77	78	cu1....cucc6	cucc5...cucc5....ci1	....	....	....
Tues.	16	09..14..	16.12.09	30.12	NE1-2.....E1-3...	NE1-4.NE1-4.E1-2	73	82	77	77	cccucistr4.....cucc4	cucc8..cucc8 ..cuci3	....	....	....
Wed..	17	11..11..	10.04.03	30 07	s0-1.....s1.2......	E1-3..E1-3.. E1-2	70	88	78	79	ccci8....cc9.........	cudci..8cicu7..cicu3	fog,	....	....
Thurs	18	98..00..	93.93.90	29.95	NW1-3.....w2-5..	NE1-3..E1-2.E1-3	69	89	80	79	cc10....cccu7.......	cu4..cu3..cccucistr5	fog	....	....
Fri...	19	93..96..	95.93.94	29.91	N0-1....s1-2......	..E1-3...... E1-2	67	88	78	78	ccci1....cc1........	cidci7.cidci7.dcistr9	fog..light...	....	....
Sat...	20	93..95..	95.94.93	29.94	s1 0 1....SE2-4..	w2-5..s2-4. SE1-2	69	88	79	79	0........ ci........0	cc9..cccustr9..ccn10	....	....	....
	21	90..95..	94.89.87	29.91	0....s1-3..........	SE2-4.SE2-4.SE1-3	67	89	80	79	cc5........0.........	.....ccci3........ci2	....	....	
Mon..	22	94..97..	96.92.91	29.94	0....s2-4..........	s2-4..s2-4..SE1-4	70	91	84	82	.........ci2..........	0.......0........ccs1	....	....	....
Tues.	23	93.96.94	..94..86	29.91	0....s2-5..........	s2-4...s2-5...s1-3	71	91	81	81	dcicsc7....ccsci5...	cc9.......cc5.....cc5	....	....	....
Wed..	24	84..87..	86.84 81	29.84	NE0-1.....NW2-3	s2-5..s2-5...s1-3	73	90	80	81	ncc10... n10..... ..	dcicic7..cccs5......	....	....	....
Thurs	25	75..85..	85.84.85	29.80	NE1-3.....E2-4...	s2-4. s2-4...s1-2	72	96	84	84	0.........0..........	cuci6....ci3........	....	....	L to NW...
Fri...	26	92..97..	93.94.92	29.95	E1-2.....SE1-3..	SE1-3 SE1-3.SE1-3	75	91	85	84	ci.........ci1	ccs1....cccu3.......	....	....	....
Sat...	27	96..03..	00.96.96	29.99	0....s2-5..........	SE1-4.SE2-4.SE2-4	66	86	79	78	n10.....ncc10.......	.....cccu7.....cucc2	....	....	....
	28	96..04..	03.98.96	30.00	0....s2-5....s2-4	s2-4...s1-3...1-2	63	86	81	76	ncc10....cccifc5....	cucccci5........cucc3	....	....	....
Mon..	29	04..08..	07.06.06	30.06	0....s2-4	s2-5.. s1-3...s1-3	60	89	81	76	cucc3····cucc7	cuci8.cudcici..8cc10	....	....	....
Tues.	30	10..16..	15.13.12	30.13	0....NE1-3........	s2-5...s1-3...s1-3	64	89	82	78	cicustr5....cuci7....	cucc5.cidcistr7cistr3	hazy all day.	....	....
Wed..	31	13..16..	15.12.09	30.13	0....s1-3	SE2-4...s1-2....0	68	87	80	78	strci2....cuci7......	cucc4..cucc3..cistr1	....	h zy......	....
					Force of wind	as 2.52 is to 10.					Amount of clouds	as 3.20 is to 10.			

Max. range 30.'1; min. 29.'74. 29.'98,29 mean for May.

76°03 mean for the month. Max. range 86°; min. 53°.

General Remarks.—5th—Fir-flies in numbers. 7th—Cucumbers in market. 8th—Catalpa trees in blossom. 10th—9½ p.m. norther came in. 18th—Ripe plums in market. 25th—L very distant. 29th—Tomatoes in market. 30th—Okra in market.

METEOROLOGICAL TABLE FOR JUNE, 1865, AT HOUSTON.

TIME.		BAROMETER A.M.	BAROMETER P.M.	MEAN OF BAR.	WINDS. A.M.	WINDS. P.M.	SUN RISE	1-3 P.M.	SUN SET	MEAN THSR.	CLOUDS. A.M.	CLOUDS. P.M.	RAIN, FOGS, &C. A.M.	RAIN, FOGS, &C. P.M.	RAIN, FOGS, &C. NIGHT.
Thurs	1	11..14..	10.08.06	30.10	N0-1....W3-5....	E2-3..E2-4..E1-2	68	89	80	79	ncc10....ccn10......	ncc10..cc9..'ccnstr9		hazy	
Fri...	2	07..13..	12.18.07	30.10	NE0-1...s1-3 ..	E1-3....E1-3....0	65	88	80	78	cc8..... cc9.........	cncc8..cccu8..cccu5	hazy		
Sat...	3	07..12..	11.08.0	30.09	0....s1-3	E1-3..E2-4..E1-2	65	89	84	79	0	cc3.....cucc3....cu1			
	4	06..10..	09.06.06	30.08	0....s1-3	SE2-4..s2-4..s1-3	68	90	80	78	0.........ci1........	cucc5....cc3....str1			
Mon	5	06..11..	10.07.07	30.09	0....s1-2	s1-3.........s1-2	67	90	60	79	cicc2....cucc5......	cucc4....cucc3.....0			
Tues.	6	07..12..	10.07.06	30.09	SE0-1..SE2-4	s2-4...s2-4...s1-3	68	90	82	80	cicu3....cccu7......	cuci5..cuci7...cicu2			
Wed .	7	07..10..	08.06.04	30.07	SE0-1..SE2-4.....	s1-3...s1-3...s1-2	68	91	81	80	cucc3....cucc5......	cuci5..cicu5..dcicc6			
Thurs	8	05..09..	08.05.05	30.07	0....s1-4	s2-4....s1-3..s1-3	71	93	82	82	cc2......cccu5......	cuci8....cicu3...ci2			
Fri ..	9	06..11..	07.05.03	30.07	0....s1-3	s1-4...s1-4...s1-3	70	94	83	82	cistr1....cc2........	cuccstr7.......cistr3			
Sat...	10	04..07..	05.02.00	30.03	0....s1-3	s1-4...s1-2....1-3	73	90	82	82	cicc5 ...cc3........	ccn10....ccn15			R
	11	98..00..	98.97.94	29.97	0.. .s2-4	s1-3...1-3...s1-2	76	70	76	77	ci1......cc4	cuci7....cuci6....ci3	R.R '.06....	shrs.0 34....	shrs ths 2.50
Mon .	12	83....95	94.87.88	29.89	0....s1-3	s1-3..s1-3..SE1 4	71	89	79	86	ccs1....cccu5.......		spr..	snr..	
Tues.	13	91......					74	..	..	..					
Wed..	14						..	..	..	..					
Thurs	15						..	..	..	..					
Fri ..	16						..	..	..	..					
Sat...	17						..	..	..	..					
	18						..	..	..	..			shr.		
Mon .	19		..10..09				..	87	78	..		cucc3...cicu3....ci2		shr	
Tues.	20	10..14..	11.07.07	30.10	0....sw2-4.......	SE1-3.SE2-5..s1-2	74	89	78	80	cicu3....cucc5......	cu4.....cu5....ccci1		shrs	
Wed..	21	08..11..	07.04.04	30.08	0....sw2-4.......	SE2-4..s2-4..s1-3	75	90	83	82	cuci3....cuuc8......	cccu4. ....ci1			
Thurs	22	05..07..	06.03.03	30.05	0....s2-4	s2-4...s2-4.. s1-3	73	91	82	82	ci2....cucc6.........	cc3......cc2.......0			
Fri...	23	06..09..	07.05.05	30.07	NE0-1..NE1-3....	s1-3...s3-4...s2-4	73	90	83	82	cistr3....cucc7......	cuci7.dcicu8..dcicc6			
Sat...	24	04..07..	05.05.01	30.04	0....	s2-4...s1-3...s1-3	73	92	83	83	cicu2....cucc5......	dcicc8..cicc3...cistr		shr	
	25	03..06..	04.99.96	30.02	0....E1-3.........	....s2-4....s1-3	73	92	83	83	ccs10....ncc10......	cccu3..cucc8..cucc4			
Mon .	26	00..04..	00.98.93	30.01	0 .. E2-4........	s2-5..s2-4..sw2-4	74	94	83	84	ncc10....ncc10......	cuccci5.....cudcici8			
Tues.	27	00..05..	03.99.96	30.00	0....s1-3	sw2-5..s2-4s..1-3	75	92	82	83	cuci2....cucc7......	cucc6.cucc7. cucstr2		R.	
Wed .	28	97..00..	96.95.95	29.98	0....s2-4	s1-3..sw1-3.s1-0	78	89	82	83	ciccu3...cuci5......	cccu9....cccucu9...		R	R
Thurs	29	93. 95..					87	..	..	..	cccustr8.cccu7......		spr.		
Fri...	30						..	..	..	..					
					Force of wind	as 2.17 is to 10.					Amount of clouds	as 4.74 is to 10.			

Max. range 30.14 ; min. 29.'38. 30.'04.76 mean for 21 days. 80°85 mean for 21 days ; max. temp. 49°. min. 63°

GENERAL REMARKS.—3d—Need of rain generally. 4th—Green corn in market. 5th—Butter beans in market. 6th—Very few fire-flies for some nights. 7th—9 p.m., fine rainbow-tinted small lunar halo. 19th—High S. wind day and night for four days past. 21st—9 p.m. fire-meteor at Galveston about NE to SW. 6 a.m. mock sun at Galveston. 27th—Ths to E & N about 6 p.m.—peaches in market. 28th—Shr to E about 5 p.m.

METEOROLOGICAL TABLE FOR JULY, 1865, AT Houston.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SUN RISE	1-3P M	SUN SET	MEAN THER.	CLOUDS.		RAINS, FOGS, &C.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P. M.	A. M.	P. M.	NIGHT.
Sat...	1		08				..	..	80	..	ccci3...cnci3.. ccci3	0.........0			
	2	18....21	19.17.17	30.17	0....SE1-3	w1-3.s2-4.sw1-32	76	89	80	79	cucccci6...ccci8.. cc2	ccccci5....cc4	shr.shr to S		
Mon .	3	18..20..	19.17·16	30 18	0......s1-3	s2-4.SE1-3..SE1-2	75	86	82	81	cccu8..cucc6.. cicc6	ccs1.........0			
Tues.	4	17..20..	18.16.14	20.17	0......s2-4	s2-4w2-4N2-5E2-2	78	87	81	82	cccu8....cccu7.. cc4	cc8....ccci7			
Wed..	5	14..17..	17.15.13	30.15	0......E0-3	N1-2..E1-2..N1-4	77	87	82	82	cc10..cuci7....ccn10	0....ci1			
Thurs	6	13..19..	..16..15	30.16	E0-1..E1-3	SE2-4.E-2-4.SE1-3	78	87	82	82	ci1..ci3...ccstr5	ci2.....0	....spr		
Fri ..	7	18..19..	19.16.16	30.17	E0-1....E1-3	SE2-4..SE1-3	79	87	83	83	ci2...ci3...dcis3	ccfc6.....cc10			.shr
Sat ..	8	16..17..	16.14.13	30.15	E0-1....SE2-4	SE1-3.SE1-3. s2-3	78	88	84	83	ci1..ci2...ccstr4	dcis7....ccci7			.shr
	9	12..16..	15.10.(9	30.13	0......SE1-3	SE1-3.SE1-3.SE1-3	78	87	83	83	cc1...cc2....cc1	strci3....ci4	spr		
Mon .	10	10..15..	14070304	30.09	w1-3....s0-1	s2-4...s1-2..s1-4	79	88	84	84	0.........0.........0	cccis6....dcici8		ths to W..	
Tues.	11	06..10..	08.04.02	3(.06	0....s1-2	s1-3.SE1-3..SE1-5	79	88	85	84	...0....0	n10.....n10			
Wed .	12	06....13	..09..07	30.09	0....sw1-2	s2-4..s1-3.NW1-3	78	90	86	85	....0....0	0.........0	spr.		ths to N...
Thurs	13	15..17..	16.14.11	30.14	....s1-3........s	s1-4E2-5s1-2SE1 3	78	87	86	85	ci1....cicc2.... ccs2	str1....cicc2	spr.shrtoW	shr to W..	
Fri...	14	14. 16..	13.08.06	30.11	w1-3....s1-4	SE1-3.SE1-3.E1-2	79	89	84	84	ccci7....cc7.....cc8	cc3....ci1			
Sat...	15	03..05..	02.96.94	30.00	SE1-2....s2-4	w1-3.SE1 3.SE2-4	79	89	85	84	0 ....0..........0	0....cc1	shr		
	16	95..00..	07.05.09	29.98	SE1-3..s2-4..N2-5	s1-3...s1-3..s1-3	81	87	85	84	cncc7.........dcici3	0....cucc5			
Mon .	17	05..08..	06.03.04	30.06	0....s2-4	s1-2...s1-3..s1-3	81	89	83	84	cc3 ....ccs2	....fc10..... ci2		...shrs...	
Tues.	18	04..06..	06.03.00	30.03	0..w2-5....w1-3	E1-3NE1-2SE1-2.E	80	87	84	84	dcicccl7..ccdci8.cc8	ccci2....fc9	hazy		
Wed .	19	02..07..	60.03.02	30.05	0....s2-4	SE1-3.E1-3.sw1-3	80	87	84	83	cc10....ccu10... cc5	ci1....cucc3			
Thurs	20	06..10..	09.08.02	3).08	N3-5..SE2-4. s2-4	s2-4...s2-4....s1-0	80	88	84	84	cicustr5.dcici.5ccci2	cccicu4....cccu9			
Fri ..	21	10..16..	18.17.16	30.14	0.....s1-2	w1-2..s2-4.. s1-4	81	88	84	74	ci3....cicc2...ciccs4	fccc6....cc9			
Sat...	22	20..23..	21.18.17	30.20	0....SE1-2	w1-3.N1-2..SE2-3	81	90	84	85	ccci4.. cicc6...ccci8	cistr2....ci2			
	23	17 .19..	18....09	30.14	0....SE1-3	s1-3...s2-4...2-4	78	93	88	86	dcin10.........ccci5	ccstr4....ci2			
Mon .	24	14..17..	16.12.09	30.13	0......s1-4	s1-2.sw1-2.SE1-4	81	88	85	85	0.........0.........ci2	cis1....ci1			spr.
Tues.	25	·5..18..	18.17.15	3).16	0......s1-3	SE1-2.SE1-3.SE1-3	77	88	85	83	ccci9.....cc9.....cc9	dcis7....ci2	R		
Wed..	26	15..17..	19.15.14	30.17	0......s1-3	SE1-3.SE1-3.SE1-0	81	89	85	85	cccu8.....cc3..dcici4	0.........0			
Thurs	27	14..18..	17.16.12	30.15	0......w1-3	s2-4.SE2-4..SE1-3	80	87	88	88	cc2.....cc1.. 0	str.........0		shr.spr...	
Fri...	28	12....18	18.16.16	30.15	0......s1-3	w1-4..s2-4..s1-2	80	88	84	84	....cucc5......strci1	0			
Sat...	29	18..22..	20.18.17	3).20	0....NE1-3	sw2-4..s1-4.s1-2	78	89	85	84	cc2......cucccci8	ci1......cccuci6			
	30	17..20..	18.14.15	30.17	0....s1-4	0....s1-4	78	91	86	85	cccu5....ncc10	cc2......cncc5			
Mon.	31	13....17	12..12	30.14	0....s1-4	0....s2-4	79	89	85	84	cicc6.....cicc4	ci2......cu5			

Force of wind as 2.45 is to 10.

Amount of clouds as 4.12 is to 10.

Max. range 30.'23; min. 29'94; 30.'12.40 mean for the month. 59°68 mean for the month. Max. range 83°; min. 7.5°

GENERAL REMARKS.—7th—4 a.m. ths to N. 14th—9 a.m. shr to W—near. 15th—High wind all last night. 21st—New moon, 8.24 p.m. 23d—10 a.m., ther. in sun 115° 1 p.m., ther 78°

BELLEVUE HOSPITAL MEDICAL COLLEGE,

CITY OF NEW YORK.

SESSIONS OF 1867—1868.

The Collegiate year in this institution embraces a Preliminary Autumnal Term, the Regular Winter Session, and a Summer Session.

The Preliminary Autmnal Term for 1867-68, will commence on Wednesday, September 18th, 1867, and continue until the opening of the Regular Session. During this term, instruction, consisting of didactic lectures on special subjects and daily clinical lectures, will be given, as heretofore, exclusively by members of the Faculty. Students designing to attend the Regular Session are strongly recommended to attend during the Preliminary Term, but attendance during the latter is not required.

The Regular Session will commence on Wednesday, October 16, and end about the 1st of March, 1868.

The Summer Session for 1868 will commence on the second Wednesday in March, and continue twelve weeks. This term will embrace courses of didactic lectures by the members of the Faculty of the Summer Session, together with clinical lectures at Bellevue Hospital, and the Charity Hospital, Blackwell's Island, and the daily recitations. Lectures will also be given by members of the College Faculty.

FACULTY OF THE COLLEGE.

ISAAC E. TAYLOR, M. D., Emeritus Professor of Obstetrics and Diseases of Women and Children, President.

James R. Wood, M. D., Professor of Operative Surgery and Surgical Pathology.
Frank H. Hamilton, M. D., Professor of Military Surgery, Fractures and Dislocations, and the Principles of Surgery.
Lewis A. Sayre, M. D., Professor of Orthopedic Surgery.
Alexander B. Mott, M. D., Professor of Surgical Anatomy.
W. H. Van Buren, M. D., Professor of Diseases of the Genito-Urinary System.
George T. Elliot, M. D., } Professors of Obstetrics and Diseases of Women and Children.
Fordyce Barker, M. D., }
Benjamin W. McCready, M. D., Professor of Materia Medica and Therapeutics.
Stephen Smith, M. D., Professor of Descriptive and Comparative Anatomy.
Austin Flint, M. D., Professor of the Principles and Practice of Medicine.
R. Ogden Doremus, M. D., Professor of Chemistry and Toxicology.
Austin Flint, Jr., M. D., Professor of Physiology and Microscopy.
William A. Hammond, M. D., Professor of Diseases of the Mind and Nervous System.
N. R. Moseley, M. D., Demonstrator of Anatomy.
J. W. Southack, Jr., M. D., Assistant Demonstrator of Anatomy.

FACULTY OF THE SUMMER SESSION.

Henry D. Noyes, M. D., Professor of Opthalmology, and Dean of the Summer Faculty.
J. Lewis Smith, M. D., Professor of Morbid Anatomy.
Foster Swift, M. D., Professor of Diseases of the Skin.
Prof. Wm. H. Van Buren, M. D., Lecturer on Diseases of the Genito-Urinary System.
Prof. R. Ogden Doremus, M. D., Lecturer on Animal Chemistry.
Prof. Austin Flint, Jr., M. D., Lecturer on Microscopical Anatomy.
Prof. George T. Elliot, M. D., Decturer on the Diseases of Children.
Prof. William A. Hammond, M. D., Lecturer on Diseases of the Nervous System.

A distinctive feature of the method of instruction in this College is the union of clinical and didactic teaching. All the lectures are given within the Hospital grounds. During the Regular Winter Session, in addition to four didactic lectures on every week-day, except Saturday, two or three hours are daily allotted to clinical instruction. The union of clinical and didactic teaching will also be carried out in the Summer Session, nearly all of the teachers in this Faculty being physicians and surgeons in the great Charity Hospital on Blackwell's Island.

FEES FOR THE REGULAR SESSION.

Fees for tickets to all the lectures during the preliminary and Regular Term, including clinical lectures	$140 00
Tickets for any of the several departments may be taken out separately.	
Matriculation fee	5 00
Demonstrator's ticket (including material for dissection)	10 00
Graduation fee	30 00

Students who have attended two full courses in other accredited schools receive all the tickets for $70, exclusive of the matriculation fee. Students who have attended two full courses in this College, or after one full course in this College, having previously attended a full course in some other accredited school, are required to matriculate only. Graduates of other accredited schools, after three years, dating from the time of graduation to the end of the term, are required to matriculate only; prior to three years, they receive a general ticket for $70.

FEES FOR THE SUMMER SESSION.

Matriculation fee (valid for the succeeding Winter Session)	$ 5 00
Fee for each of the separate courses of lectures	10 00
General ticket admitting to all the lectures	50 00

Graduates of the Bellevue Hospital Medical College will be admitted to the lectures of the Summer Session on the Matriculation ticket; all others will be required to take out tickets.

☞ The dissecting-room will be kept open until about the first of May.

Payment of Fees is invariably required at the commencement of the Session. There are no exceptions to this rule.

Students, on arriving in the city, are requested to report at once at Bellevue Hospital, situated on the East River, between Twenty-sixth and Twenty-eighth Streets, and inquire for the Janitor of the College, who will take pains to aid them in securing comfortable accommodations without delay. Entrance to the Hospital is on Twenty-sixth Street.

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address the Secretary of the College, Prof. Austin Flint, Jr., Bellevue Hospital Medical College

For information concerning the Summer Session, address the Secretary of the College, or Prof. Henry D. Noyes, No. 68 Madison Avenue, Dean of the Summer Faculty.

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PROF. HALL'S COPPER SCROLL LIGHTNING ROD.

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GALVESTON, June 7, 1867.

The undersigned have made an examination of the Challenge Copper Scroll Lightning Rod, patented by Prof. Hall and introduced into Texas by John S. Triplett, Esq., General Agent.

We find the claims of the Patentee based upon the principles of true science and experience, and we take pleasure in commending it to the confidence and patronage of our people, as incomparably the best means of security against the ravages of lightning that has ever come under our knowledge or observation: C. G. Forshey & Co, consulting engineers, Strand, Galveston; Greensville Dowell, M. D., Professor of Anatomy and Editor Galveston Medical Journal; Tipton Walker, Civil Engineer; C. G. Young, M. D., and President Houston and G. N. R.R. Co.; W. W. Martin, Supt. Public Buildings.

It has also the endorsement of the following underwriters and insurance agents, viz; James Sorley, Agent Underwriters' Agency New York; E. P. Hunt, Insurance Agent; J. S. Sellers, President Merchants' Mutual Insurance Co.; D. F. Holland, General Insurance Agent.

THE

Galveston Medical Journal.

Vol. II. AUGUST, 1867. No. 8.

Delirium Tremens.

BY W. H. FARNER, M. D.

This fearful malady, although unknown by that appellation until about the commencement of the present century, has become familiar to almost every practitioner, as its cause so universally exists. There is no class or condition in society exempt from its rude assailment, (except the strictly temperate.) The holy sanctuary has yielded up to its potent influence the brightest ornaments of the pulpit—the merchant or business man has been suddenly checked in his bright schemes for future emolument and forced to retire to his room, trembling in every limb, his anguish increased by imaginary tortures, usually worse than those which afflict the damned. The lawyer and the physician share the same fate—the high and the low, the rich and the poor—the the king on his throne, or the president with the honors of a nation clustering around him, or the beggar in the street, are all alike liable to an attack of this disease.

As prevalent as this disease has become, presenting so many opportunities for the practitioner to clearly diagnose the case, and not confound it with *encephalitis*, this distinction being of the utmost importance for a successful treatment. Although apparently similar in many respects, and perhaps sometimes complicated, the correct treatment of the one would prove fatal in the other. An attack of delirium tremens is usually easily distinguished from inflammation of the brain —the past history of the patient presenting, doubtless, the best index to a clear understanding of the case. If such history reveals to us the fact that the patient has been intemperate in the use of alcoholic stimulants, opium or tobacco, and upon inquiry we find there has been a deprivation of his accustomed stimulant—that his sleep has been disturbed for several nights, or that he has just come out of a debauch, and now presents to the practitioner the following symptoms, viz: talking wildly, more or less trembling, not a fierce or wild delirium, but a delirium peculiar to itself, and of the most intense, busy character, without the meaning of harm to himself or to those around him; answering correctly (in the absence of the paroxysm, which comes on at irregular intervals,) such questions as you may propound to him. These, together with a soft, yielding pulse, a cream-like coating on the tongue, will, doubtless, lead even the inexperienced physician to just conclusions, as these are generally the characteristic symptoms of delirium tremens. But I have treated several cases presenting quite a different phenomena—sometimes a rapid and bounding pulse, suffused eyes; red, pointed and tremulous tongue; wild and furious delirium—but in every case the delirium came on in paroxysms. There was that same loss of sleep, and the surface bathed with profuse perspiration, and that same clearness in answering such interrogatories as I might propound to him, when the paroxysms would somewhat abate.

The disease having once been properly diagnosed, a variety of opinions as to the treatment meet us on the very threshold; some claiming that repeated emetics are indispensable. Others adhering with equal tenacity to opiates—others to alcoholic stimulants—while others again claim that the expectant treatment is the surest, the safest and the best.

Having had considerable experience in the treatment and management of cases of delirium tremens, although, with but four exceptions, the cases have presented nearly the same symptoms and results, either from a diminution or cessation of the use of alcoholic stimulants, or a continuance of the same until chronic inflammation in various parts or tissues of the body supervened, and the over-excited system at last yielded, even while on a spree. Hence I am forced to the conclusion that no specific plan can, with safety be laid down. The physician must take a thorough survey of the antecedents of the patient—the present morbid condition of the system, and the exciting cause of the attack; it matters but little to the practitioner how much professors may quarrel and wrangle about the appropriateness or inappropriateness of the name, let him combat the symptoms presented to his view with such agents as his experience and that of others have found to be the most beneficial in similar cases, leaving the settlement of abstract theories to others, and the results of his treatment will generally be entirely satisfactory.

Most of the cases that I have witnessed have been tormented with apprehensions of personal danger—filled with fear at the fancied approach of all kinds of disgusting reptiles and animals. One case, however, was so dissimilar, and presented to me at the time so many points of interest that I kept copious notes, and now extract the same from case book.

E—— P——, æt. 45. Was a graduate of the University at Philadelphia, and had been a prominent practitioner for several years. Accumulating wealth he retired from practice. Being very fond of the study of natural history, and a fine taxidermist, he devoted much of his time to collecting and preserving specimens of fowls and animals. Having been selected as his family physician, I became perfectly familiar with his virtues and his vices. From his youth he had indulged in the free use of ardent spirits, but for several years past had become an excessive drinker, rarely leaving his house without taking his "companion" with him. At night, when he retired to rest, his decanter, well filled with strong brandy, was placed within his reach, and its contents usually disappeared by morning. In the absence of his usual amount of alcoholic stimulant, for a few hours only, or from any sudden emotion, he would be seized with palpitation of the heart, tremor of the limbs, and a profuse perspiration would break out over the surface of the body, which he always averred smelt just like that accompanying yellow fever; a few drams of his potent fluid soon restored him, and he "would be himself again." About the first of July I was consulted with reference to the discontinuance of the use of spirits. I suggested the hazardous results that might be expected from the immediate withdrawal of a powerful stimulant, which had been assimilating his system to an unnatural and dangerous stimuli; recommending him to fill a five-gallon keg with his choice brandy, taking his accustomed drinks through the day and night, and at morning filling up the keg with water—continuing this from day to day, thus gradually diminishing the quantity of brandy until he could leave it off without danger to his health or a sudden revulsion to his system. To this he would not assent, saying that he had promised his wife to abandon its use entirely, and that he would rather die in the noble effort of reformation than fill a drunkard's grave. Being a man strangly bent on his own will I dismissed the subject, simply recommending him to take fluid extract of valerian and small doses of morphia for a few nights.

July 10th.—Six days aftes the interview alluded to, I saw him standing in the door of one of the stores. Shaking hands with him I noticed a burning heat in the palms of his hands, and a great tremor of his arms and legs, he expressed great delight at seeing me, was unusually loquacious, and extremely hurried in his gesticulations and language. These, together with his haggard countenance, his glazed eyes, and the perspiration that stood in huge drops on his broad forehead, immediately excited my most serious apprehensions. To all my inquiries he gave the most satisfactory answers. His mind suddenly diverged from the subject of conversation, running over various subjects, dwelling at length on natural history, inviting me to his house to examine some rare and beautiful specimens that he had just mounted. Turning suddenly to me, he remarked, "I believe that I am in a kind of reverie to-day, and that something ails my optic nerve, for each eye has become a separate and distinct organ, transmitting to the brain two objects, when I know only one exists; and the most beautiful imagery of parks, of mountain scenery, of cities and villages of transcendant beauty, pass before my wild vision like the shifting scenes of the magic lantern. The friends of former years, many of whom have long since passed away to the spirit land, gather around me, and greet me as they were wont to do in our jocund days. I know that it is only imagination, but to me it is real." I prevailed on him to let his servant take him home in his buggy, assuring him that I would ride out in a few hours to examine his specimens. The day was unusually hot, and he had been much of the time exposed to the sun, being in an open buggy. Upon his return home his wife immediately dispatched a messenger for me. I arrived there about two o'clock, and found him rolling on the bed, but in no apparent pain. Everything that he had swallowed after a few hours of his ceasing to drink, had been immediately rejected by his stomach. His wife expressed as her belief that he had not slept for four days and nights, and that his sweating had been so profuse as to cause her to change his clothes and bedding several times during the days and nights intervening. He had remained in his room until this morning. Ordered tinct. vini gallici f℥ iv., morphia sulph. grs. ij.; one dessert-spoonful every hour. In case the stomach should not retain it to give enemas of tr. opii, repeating the same until sleep was induced. I visited him again during the evening, and remained during the night. He was quite delirious; trembling continued to increase—he fancied the room full of people, all of them enjoying themselves to their heart's content. Finding that enemas were not retained, and the stomach in such an irritable condition, I was compelled to adopt the Iatroleptic plan of treatment, using embrocations of spts. turpentine, chloroform and tinct. opium. About midnight he complained, for the first time, of severe pain in his head, stating "that his skull was filled with liquid lava taken from the very centre of hell." Whether any pain actually existed or not, I am not prepared to say. But my opinion at the time was, that it was in the main, if not entirely, imaginative, having been so deceived with reference to his statements about his specimens, his abundant sleep and rest, and numerous other statements, made with the same apparent clearness as this statement. His pulse was somewhat rapid, but soft and compressible; his tongue moist and covered with a thick cream-like coating, the apex and edges somewhat red, with slight conjestion of the conjunctivæ, perspiration undiminished. Thus far, the nervous exhaustion and the nervous irritability had marched along together, each apparenrly striving for the ascendancy. Temporary relief at times, seemed to be derived from the external treatment. Although the paroxysms returned with equal violence, and sometimes greater than previously, there was a marked increase of time between each one of them. I had taken the precaution at my first visit to have his room darkened, and enjoined quietness about the premises. He had lain for some time comparatively quiet, when bursting out suddenly in a rhapsody, he said, "Oh! how beautiful, how sublime, if this is only the garden of the Gods how much more grandeur must surround their tabernacle! Behold how far it extends; far beyond the limits of my transparent vision. One vast flowery carpet is spread out before my enraptured eyes. The stalks are festoons of pure gold, interlaced with vines of silver, while the flowerets are of diamonds, emeralds and other precious gems, far surpassing the imagination of earth—reflecting back the blazing light of glory to God's eternal throne, while music of the most enchanting notes from birds and beasts—a perfect band of choristers—fill the air with wild and melodious harmony to their mighty and mysterious creator." Then turning to me as a traveler to his guide, "can you not lead me on to greater beauties and more terrestrial grandeur—the gaiety of earth may tempt me—the Devil may offer me power over all his dominions—even my wife and daughter, with all their loveliness, may beckon me to return, but for an eternity of years, will I remain here, until I arrive at that degree of intelligence and purity, that the Gods and Angels will permit me to sit down with them at their great intellectual banquet, which I see spread out in the far distance." The ideal thoughts and sublime scenery suddenly passed away, giving place to one of the severest paroxysms that I witnessed during the treatment of the case, accompanied with cramps in the extremities. After their partial subsidence, he again answered my questions correctly and pertinently, telling me that I had misrepresented his case, perhaps intentionally, to his wife, but if I was treating him for congestive chills I would kill him, as he well knew that it was only delirium tremens that ailed him.

The tremor and paroxysms continued with little or no abatement up to noon the 14th. During the whole time sleep had not been induced, and such was the intensity of his imagination—at times marshaling his legions of invisible dragoons and urging them on to fields of conquest, to carnage and blood; giving descriptions of the valor of his spectral hosts; the beauty and symmetry of their horses, and the unique style of their paraphernalia; at other times exhibiting to innumerable spectators his fancied menagerie of wild animals—dwelling at length, and quite accurately, upon their habits and nativity, calling them to his side, and then ordering his slaves to turn them loose in wild confusion, and then he would laugh hysterically at the supposed fear and consternation he had produced among his visitors. Another favorite with him was a huge "diamond serpent," which he claimed "was a direct descendant from the one that visited Eve when she came fresh from the plastic hands of her Creator—retaining all the meekness and suavity of its illustrious ancestor." Its "ponderous weight would crush the leviathan, while it glides so mystically over me that it seems more like a shadow than the monster that it is."

4 o'clock P. M.—Nearly the same condition—spasms less frequent; nervous exhaustion rather increased. Enemas and solid opium had been used per anum. A slight and highly offensive discharge had taken place an hour previous to my visit; retching still continued, at times throwing up matter of a dark grumous, or coffee-ground appearance. [I should have mentioned at the proper place, that a hemorrhægic diathesis existed, suffering, frequently in years past, with bleeding from the lungs, and sometimes from the stomach.]

6 o'clock.—No vomiting for the last two hours. Continued the embrocation until 8 o'clock. Finding his stomach more quiet than heretofore prescribed brandy f.ozj., chloroform iij dr., morphia ⅛ gr., to be repeated every two hours. Shortly after taking the second dose he fell into a disturbed slumber, and slept for over three hours. On awakening gave beef tea, which was also retained. At 10 o'clock another paroxysm; after it had subsided gave idr. chloroform in a wine-glass of diluted brandy.

1 o'clock, A. M., 15th—Slept soundly, with sonorous breathing, until six in the morning. Tremors somewhat abated; still wandering; delirium. Ordered injections with 1 oz olei ricini every third hour. At 2 o'clock, P. M.. had a copious discharge from the bowels, of a tar-like appearance, which continued, at irregular intervals, for two days. Repeated brandy, chloroform and morphia at 5 P. M. Soon after sleep came to his relief, and he slept quite calm until 3 o'clock A. M.

16th—Awoke much refreshed. During this sleep his sweating abated considerably; still great nervous exhaustion. Gave valerianate of quinia in conjunction with the chloroform mixture. Ordered beefsteak slightly broiled, which agreed with him. Same treatment kept up during the 16th and 17th.

Up to 10 o'clock, P. M., of the 17th, the bad symptoms had been gradually yielding—wild imaginings still harrassed him—his voice had not that muttering, husky sound that had from the commencement characterized the disease. He spoke with clearness and distinctness, and, for the first time, manifested anything like fear. The fishing and hunting, the sports of his youth, his animals and dragoons, his bedfellows, an "hundred infants and a portly old gentleman," had all left his imaginative brain. His visits to the garden of the gods had ceased. He was now laboring under the hallucination that he was sentenced to be executed and awaiting his executioners. They came at last; he met them with a steady gaze, and for some time the tremor entirely subsided. Instead of that lax condition of the system, every nerve and every muscle seemed strained to its utmost tension. There was a fierce wildness in his actions and looks which is indescribable. He gazed at his fancied visitors with the fierceness of a madman. "Come, let me examine your swords. I know my time has come. I know you can as easily execute your orders as I could in health hurl an infant into eternity. But think not to terrify me with your great bass drum clothed in black, from which that mean-looking imp beats out such doleful sounds. Nor by your swords. Are they keen and sharp?—capable of doing your master's bidding." Then apparently feeling the points and edges, he hurled them from him. "These are but stage fencing foils. Go back and get such as your victim is worthy of." Then bursting into his peculiar laugh, he said, "I have foiled them with their own foils." His head soon sank back into his pillows. He lay apparently quite languid for some time. The last preparation was repeated, when he shortly afterwards fell asleep and slept for eight hours. On awakening, reason had resumed its throne, and he immediately ordered his boy to get his buggy ready, in order that he might return home; having no recollection of anything that had transpired from the morning that he had left home in the open buggy up to the present time. The treatment, somewhat modified, was kept up for several days, followed with iron tonics, which was kept up for several weeks. Restoration to health was slow—appetite faulty, but he at last recovered. His appetite for tobacco and spirits never again returned to any great extent.

Since treating the above case, I have used chloroform both by inhalation and internally, and am convinced that it is one of our most valuable agents in the treatment of Delirium Tremens. As an internal remedy, the virtues of chloroform in this and many other diseases is at present greatly undervalued. I have used it internally in many cases of Delirium Tremens, without combining it with morphia or brandy, and am fully satisfied that it is preferable to any other agent. In the first stages of gonorrhea, it approximates as near a specific as any other agent. In peritonitis, cholica, and many other similar affections, it is invaluable; and my opinion is that it will ultimately become common as spirits of camphor as a family medicine.

Recurrent Hæmaturia Miasmatica.

BY S. F. STARLEY, M. D., FAIRFIELD, TEXAS.

DR. DOWELL: *Dear Sir:*—Under the above heading, I will give you a brief account of what I suppose to be a very rare, as well as fatal form of disease, as it occurred in this neighborhood last Fall (1866.) The disease was generally, if not always ushered in with a chill, and for the most part attacked those who were suffering from the malarial cachexia, or were at the time affected with intermittent fever, in which case the grave symptoms of the disease would come on coincidently with the regular recurrence of the intermittent paroxysm. Soon after the chill, the patient would pass a large quantity of bloody urine; sometimes amounting to half a gallon or more in the course of a few hours, after which the urine would become perfectly clear and remain so for twenty-four, thirty-six or forty-eight hours, when, either with or without the accompaniment of another chill, the urine would again become bloody, and immense quantities would be evacuated, to be again followed by a total cessation of the hemorrhage for a similar length of time, when, if the patient still survived, it would return in regular order. Fever of a rather asthenic grade would soon follow the first chill, and continue, with slight remissions, throughout the career of the disease. Excessive nausea, and vomiting of large quantities of yellow bile, was an early and persistent symptom. In a large proportion of the cases, the skin would take on a deeply jaundiced hue soon after the commencement of the attack. The urine, in these cases of intense jaundice, did not show the yellow tinge when diluted with water as it does in common jaundice; in fact it would be quite clear except when the hæmaturia would occur, and then the diluted urine only showed the red tinge of blood. The peculiar, dark saffron color of jaundiced urine was never observed, but the red color of blood was suffused through the urine, and showed no tendency to coagulate or throw down a sediment. The disease usually run its course rapidly, either ending in death or convalescence in from three to five days. As in other forms of malarial fever, there is intense cephalagia, lumbar pains, and aching in the limbs. In one case observed by me there was an intense throbbing pain experienced in the region of the right kidney, which persisted throughout the whole course of the disease. This case proved fatal on, I believe, the 5th day.

The treatment pursued by me was based upon the evident connection of the disease with malaria, and was substantially as follows: First, a mercurial cathartic, combined with small doses of morphine to prevent it running off at the bowels too soon, and to aid in allaying the nausea and vomiting, and to procure rest and relief from the lumbar pain and aching in the limbs and head, which always attended the fever. Sinapasms to the epigastrium were found useful in controling the vomiting. Of course, from the periodic character of the disease, and its evident dependence upon malarial poisoning, quinine entered largely into the treatment. In some cases, it was necessary to administer an arterial sedative—as the veratrum viride—in order to procure an abatement of the febrile excitement before commencing with the anti-periodic. The quantity of quinine given was generally large, as the remedy seemed to exercise less control over the paroxysms than it usually does in other forms of malarial fever incident to this country. I may here mention that cases of congestive or pernicious intermittent were quite common during the time of which I am writing; some of the cases proving fatal in the first attack, and before medical aid could be procured. Of the various remedies employed, with a view of controlling the hemorrhage from the kidneys, I will only mention such as seemed to me to be beneficial in a marked degree. These were the gallic acid, a strong decoction of uva ursi, and a saturated solution of per-chloride of iron. The latter was given in doses of from ten to twenty drops, at intervals of from three to five hours. The gallic acid and uva ursi were given as soon as the bowels were cleared, and continued as long as the hæmaturia persisted. The acid was given in five grain doses every three or four hours, while the indications for its use continued. The disease showed a strong tendency to fatality, nearly one-half the patients dying. Where recovery took place the convalescence was not unusually protracted, though the patients were anæmic, and all afforded opportunities for exemplifying the restorative hæmatic effects of preparations of iron and quinine. Having had no opportunity of making post mortem examinations of persons dead of this disease, I have no knowledge of its anatomical peculiarities. But from its most prominent symptoms, and its evident dependence upon malarial causes, I regard it as a congestive form of intermittent fever, the stress of which is thrown upon the kidneys. But what it is which causes the determination to these organs I cannot tell. Certain it is that they are excited to greatly increased functional activity, for coincidently with the hemorrhage the quantity of urine secreted is largely above what I have ever known in any other condition of the system, unless it is when the kidneys take upon themselves the task of removing some large dropsical effusion.

Should this disease become more frequent, as it is to be feared it may, it will behoove physicians to study its phenomena closely, and in the interest of humanity make known whatever they may find useful in its treatment, with the hope that the mortality attending it may be lessened.

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BEDI, GRIMES CO., TEXAS, June 22d, 1867.

DR. GREENSVILLE DOWELL:—

Dear Sir:—Some numbers of your wide-awake little journal have fallen into my hands. A piece of rare good fortune, as I have been out here in this "land of promise" about a year and a half, deprived of all mail facilities, and yours is the first medical journal which has greeted my eyes since the war. What a change! What a deprivation for one who has once been connected with the medical press, and who, as corresponding editor of one of our most respectable journals, (the Savannah Journal of Medicine and Surgery,) once in better days received and read medical periodicals from Maine to California. But let us not repine; there is life in the old land yet, as your list of medical journals in the South conclusively shows. Among these I notice the Southern Medical and Surgical Journal, Augusta, Georgia, the organ of my alma mater, and the recipient of my medical contributions for fifteen years prior to the late disastrous war.

But my object in writing is not to give you my previous history Suffice it to say then that the adverse circumstances by which I am surrounded have not deprived me of my taste for medical reading or writing, and that I intend, as soon as I can rake up a little of the needful, to gratify the former by sending for something on your list, and the latter by an occasional contribution, perhaps, to your journal; which, if I mistake not, is the only one in this my adopted State. The fact is, whenever a man ceases to post himself in the improvements in such a progressive science as medicine, he should cease to practice it as a profession. And every one should be willing and ready to contribute his quota towards this progression and improvement.

I see that you are disposed to discharge this important obligation. This is strikingly manifest in the Registration Law, which you took so much pains to draw up, and have submitted to the last Legislature of Texas. On this you ask a report from medical societies, and the "opinions of individual physicians as to its necessity and importance," &c. So far as my humble opinion goes, I can say that such a thing is highly necessary and vitally important, and should, by all means, be urged to a consummation, should it ever be our good fortune to have again a regularly organized civil government. In the meantime, while waiting for this, it may be well for us to consider how such a law can be made most conducive to the interest of the community and the dignity and usefulness of the medical profession.

You say the Board of Health shall be composed of "two regular practicing physicians, graduates of regular medical colleges." And again you say, "cities and incorporated towns may elect two aldermen and two regular practicing physicians, graduates of regular schools of medicine," &c. This is certainly all right, for it is hardly presumable that men deprived of the advantages of a thorough medical education would make very good conservators of the public health, or "Sanitary Commissioners." What could the so-called doctors, who so much abound in this land of Texas do towards instructing the people in hygiene, the prevention of epidemics, &c., when, without such safeguards as your proposed bill contains, some might be placed on the Board who might be considerably nonplussed to tell the meaning of epidemic and hygienic? Fine guides these would be, indeed, on the most recondite and difficult of all subjects—the causes, mode of propagation, mollifying influences and means of preventing and curing epidemic and endemic diseases.

In another place you say all Coroners shall be regular graduates of some medical school. Another move in the right direction; for certainly our Coroner's courts, as heretofore organized, have been perfect burlesques. The office should, by all means, be filled by a well-educated, intelligent physician. Who but him is capable of giving anything like a correct judgment on the many difficult and obscure points involved in the science of Medical Jurisprudence?

In form 13 of your appendix to the law, under the head of "Practicing Physicians' Register," I notice you have a column headed "Medical School." Now how is it when the practicing physician (?) has no medical school? For it seems that a good many here in Texas are in this category. Is there any law in this State regulating the practice of medicine? Or are all men who choose to set up for doctors, regular, irregular and defective, allowed to trifle with impunity with the lives of a credulous, but innocent people? It would appear so from what we see around us.

Would it not then be a good idea to incorporate a provision in your law, or to have a separate law, requiring all who come before the people as physicians to register their license or diploma with a justice of the peace in the district or beat where such men offer to practice?

Surely the public needs such protection as this; and then if there is a law regulating the practice of medicine, it can be enforced. And if there is no law, and the people are willing, with the knowledge before them, to trust themselves in the hands of ignorant and unqualified men, who have never learned even the rudiments of the great healing art, then their blood be on their own heads. As perishes the fool, so they must perish. But let them not be duped and beguiled. Let them not be led ignorantly to the slaughter. Humanity forbids it. Wishing you much success, I am

Yours truly,

JNO. STAINBACK WILSON, M. D.

Suicides in Galveston.

GALVESTON, June 15th, 1867.

GREENSVILLE DOWELL, M. D., *Editor Galveston Medical Journal:*

DEAR SIR:—I herewith hand you an abstract from my records, relative to suicides committed in the city and county of Galveston since last September.

Sept. 17th, 1866.—A white man, an old resident of this city, aged about sixty years—mechanic—cut his throat with a razor in his own house. Very intemperate in his habits, and had been for two or three weeks previous almost constantly intoxicated.

On the same day, a freedman, aged about thirty years, cut his throat with a razor while laboring under an attack of delirium tremens.

On the 28th of October a man on board a vessel just coming into port, aged about twenty-five—Italian—shot himself with a pistol. He had resided in New Orleans. I know nothing of his history or previous habits.

On the 7th of November a man hung himself at Dickinson Bayou. He was a German; about twenty years old; a stranger.

On the 21st of November, a man shot himself with a pistol. He had been a resident of this city for several years, and had borne a good character. Of sober habits, but was addicted to gambling more or less. An American; about thirty-five years old.

On the same day another man was found dead, and from the circumstances of the case it was believed that he had committed suicide. He was an American; about thirty years old. His habits were said to be good. He had resided in this city but a few months previous.

On the 7th of May, 1867, a man who had just arrived in this city from New Orleans, where, I understand, he had resided for some years, committed suicide by taking morphine and laudanum. He was about forty years old. I do not know anything about his history or habits.

On the 22d of May, 1867, a man who had just arrived committed suicide, but by what means could not be ascertained. He was a German Jew, about thirty years old, recently from Ohio. From letters and memoranda found on him it appears that intemperance was the cause.

May 24th—A young man who had recently come to this city from Louisiana, shot himself with a pistol. He was about eighteen years old.

June 7th—A man drowned himself in a cistern. He was a Spanish creole from Louisiana, about thirty years old. A painter by trade, and of very intemperate habits, and had been intoxicated for nearly two weeks previous.

Of the foregoing cases, in at least seven of the ten, the immediate cause was, undoubtedly, intemperance. In one case the immediate cause appears to have been gambling.

From my records I find that at least some eight more cases of persons who were found dead or died very suddenly during the last five months, the cause was undoubtedly from excessive drinking of intoxicating liquors.

J. HANNAY,
Coroner of Galveston County.

Menstruation, or the Menstrual Flow.

AN EPIPHENOMENON OF OVULATION.

BY G. M. B. MAUGHS, M. D.

Professor of Obstetrics and Diseases of Women and Children in the Humboldt Medical College of St. Louis, Missouri.

Menstruation is a complex phenomenon connected with, and dependent upon, ovulation; and the menstrual flow is not a necessary, but very general, accompaniment.

The principal act of menstruation—that which gives it its true importance in the animal economy—is the periodical maturition and discharge of ova, and this act in the human female corresponds with the oestrual period in the inferior mammalia; oestruation is menstruation in these animals.

We have thus stated this question, not for the purpose of making two distinct propositions, but to give more fully the matter of controversy before the Society.

Our first argument in support of the view here enunciated, is that furnished us by the abnormal condition of the ovaries and uterus—1st. It is found, when the uterus is present, but the ovaries absent or atrophied, there is no development of sex, no expansion of the pelvis, no enlargement of the mammæ, no soft contour of person characteristic of woman, no menstruation or menstrual molimen, no attachment for the opposite sex, no woman's voice; but, in despite of the fact that she possesses both uterus and vagina, she either remains a child or approaches, morally and physically, more nearly the male than the female. In proof of this, a case is given by Dr. Pears (Phil. Trans. 1805, Vol. XCV, p. 223), in which the subject, a female aged 23, at her death "she had still the appearance of a child, with no indications of puberty, either in mind or body. The pelvis was undeveloped, the mammæ and nipples not larger than in the male, and the menses had never appeared. On post-mortem examination it was found that the uterus, though normal in form, had not increased in size beyond the infant state, and (which was the cause of the whole of this absence of development) the ovaries were so indistinct as rather to show the rudiments of what ought to have formed them than any part of their normal structure." Again, the same condition was found by Dr. Roberts with the castrated women of India. "The individuals he examined were about 25 years old, large size, quite muscular, and in full health; they had no mammæ, no nipple, no hair on the pubis, the orifice of the vagina was completely closed, and the arch of the pubis so narrow that the descending rami of the pubis of the opposite sides came almost in contact. The whole pubic region showed no deposit of fat, and the nates were not more developed than in males, while the rest of the body had the usual quantity of fat. *There was no trace of menstrual secretion, nor any discharge vicarious to it*, no sexual appetite." Were other proof of the dependence of "sexual development upon the ovaries necessary, we might cite the innumerable direct experiments upon the pig, calf, rabbit, &c., where it is found, after the removal of the ovaries in the young state, the sexual characters are never developed.

2d. When there is no congenital defect, and puberty is fully established and menstruation regular, if the ovaries be removed or destroyed by disease, both menstruation and the menstrual molimen immediately cease. There is no longer a periodical excitation—no oestrum veneris—and the female, whether human or of the inferior animals, loses the sexual character, more or less approaching that of the male. This is well illustrated in the case of a young woman, 23 years of age, both of whose ovaries were removed by Dr. Percival Pott on account of their forming hernial tumors, which incapacitated her for work. The woman perfectly recovered; *but the menstruation, which before had occurred with the greatest regularity, never afterward appeared;* the breasts, which had been voluminous, subsided; she also became thinner, and assumed a more masculine appearance." Vanlevier mentions a case in which "menstruation suddenly ceased in a young woman in good health. No disease followed; but soon afterward a perfect beard began to grow upon her face." Here, there can be no doubt, the cause of such change was atrophy of the ovaries. "Again, in women who have passed their menstrual and child-bearing period of life, and in whom, consequently," says Dr. Simpson, "the functions, and often the healthy structure of the ovaries, are lost or destroyed, we have frequently an opportunity of observing a similar tendency toward an assumption of some of the peculiarities of the male—an increase of hair often appears upon the face, the mammæ diminish in size, the voice becomes stronger and deeper-toned, the elegance of the female form and contour of body is lost, and frequently the mind exhibits a more determined and masculine cast." Direct experiments upon females of the lower class show that, after the removal of the ovaries, there is no longer a periodical excitation of the reproductive organs, no return of the oestrual period; and the female, losing her sexual peculiarities, approaches more or less closely those of the male.

In the female of the lower animals the same peculiarity is seen to take place after the loss, by age, of the functional activity of the ovaries, which we have seen in the human female, for in the loss of the ovaries by removal or disease, they lose their sexual peculiarities. In some horns grow, the neck thickens, and otherwise they obtain a virilescent type, until they can scarcely be said to differ in general appearance from the male. The same is true of birds, which have lost the functional activity of their ovaries from old age. These are observed to assume more or less perfectly the plumage, voice, and even the habits of the male. The argument here is, that the ovaries give to the female her sexual peculiarities. The functional activity of the ovaries in the human female is known as menstruation; in the female of the inferior animals it is oestruation; in both it is ovulation. And as ovulation is an ovarian, and not uterine, action, therefore the true menstrual act is in the ovaries, and not with the uterus; consequently maturation and discharge of Graffian vessicles constitute the true menstrual and oestral epoch, and not the discharge of blood or mucous; and, in incontrovertible proof of this it is found that,

3d. When the ovaries are present, though both vagina and uterus be absent, all the conditions of puberty are normally developed, the external menstrual flow only being absent; with all the physical and moral characteristics of her sex, she may even marry, to awake from her dream of love and hope by the fearful discovery of physical defects of which she was not aware, was indeed conscious, by her organic impulses, did not exist. In positive proof of this, a young girl, 21 years of age, who had menstruated twice, and for three days at a time, had been for a long time violently in love with an officer, finally gave herself up completely to his desires; after several attempts, renewed each time with much ardor, but which each time proved fruitless, the young man finally discovered and acquainted her with the fact that she was not formed like other women, and advised her to consult a physician. She was examined by the learned French Accoucheur, P. Cazeaux, and Thirbal, from whom we learn the following facts: "The countenance, stature and development of the limbs and breasts differed in no respect from what is usual in young girls of her age. Her general health had always been good. In the month of May last her courses appeared for the first time, and continued for three days; she had, however, several days before, experienced symptoms of uterine congestion. In the month of July they showed themselves again, for the last time. The attempts of her lover were twice followed by a considerable flow of blood."

"The mons veneris is completely destitute of hair, with which it is usually covered; the ovaries presented on either side at Inguinal rings." "The vulvar opening was bounded by the greater and lesser labia, but both were much less developed than usual. The finger, which could be introduced only with difficulty into the vulvar orifice, was arrested at the depth of three-quarters of an inch, so that it was only by forcing up the extremity of the vagina that the first phalanx could be made to enter that canal."

Upon further and careful examination they found that the lowest extremity only of the vagina was present; that the upper four-fifths of that canal and the uterus were absent; *that the hypogastric and lumbar pains which were experienced regularly, and almost monthly, were the expression of periodical ovarian operations;* that the blood of the menses, which had appeared twice in this young girl, had its origin from the mucous membrane of the vagina, and was, of course, a misplacement of the menstrual flux.

Now, here is a case, given by authorities that do not permit us to suppose any mistake, in which the periodical menstrual molimen occurred regularly, and in two instances the entire completion of the menstrual act, even to its epi-phenomenon the menstrual flux, without any uterus, and only the vulvar orifice of the vagina; therefore, the uterus and vagina are not necessary for the complete accomplishment of menstruation, and consequently the uterus is not the *cause* of menstruation. And, as in all the world there cannot be found a case where this act was regularly and completely performed in a healthy female without ovaries; and, as from the very nature of the act, such a thing is impossible, therefore it follows, as an irresistible conclusion, that the *cause* of menstruation, as well as the true menstrual act, is in the ovaries—ovulation. Again, direct experiments on the lower animals prove that, if the uterus and upper portion of the vagina be removed, but the ovaries and tubes be left intact, the periodical orgasm, analogous in these animals to menstruation in the human female, returns with great regularity, while such periodical orgasm is always immediately and forever prevented by removal of the ovaries, though the uterus and vagina remain; therefore, the cause of oestruation—the essential act analogous to menstruation in the human female—is in the ovaries—is ovulation.

From these facts, we infer, with but little fear of successful contradiction, that woman is what she is, not because of her womb, as was formerly supposed, but on account of her ovaries; and that the efficient cause of the menstrual molimen and oestruation is in the ovaries. That true menstruation is the periodical changes taking place in the ovaries, while the external flow, so-called menstruation, is only a concomitant, a result, an external sign, a secondary phenomenon, and not absolutely necessary to the accomplishment of the act or purposes of menstruation. And this derives positive proof in the fact that many women have become mothers, even the second and third time, without ever having had a menstrual flow.

Our second argument is drawn from the normal anatomical structure and known physiological action of the ovaries.

The ovaries of all animals are egg-bearing organs, and from the slug to the human female, much the same in structure, consisting of parenchyma or stroma, and vesicles containing ovules. In the human female they are two small, smooth, elastic bodies, constituted of special tunics and stroma containing ova. The outer or peritoneal coat covers all but the inferior border, while the more internal albugineous coat closely invests the stroma, giving, by its firmness, shape to the organ. The stroma is a greyish, red substance of moderate firmness and consistence, composed of nucleated, elastic, firm, fibrous, connective tissues, in the meshes of which, reposing as upon an elastic, velvety bed, are a great many Graffian vesicles, from ¼ to three lines in size, according to their development. Each Graffian follicle contains an ovum of microscopical size, a large cell, and, though but a cell, pregnant when vitalized, dynamically energized, by contact with the sperm cell, with all the phenomena of special differentiated organic life, as manifested in the phenomenal existence of the individual or the race. These Graffian vesicles, like other tissues of the body, are subject to constant changes—cell changes—from infancy to old age, but can be said to have a physiological existence, physiological activity or function only during the child-bearing period, at which time from 40 to 200 or 300 are constantly present, differing, however, greatly in size, those deeply seated in the stroma fading into mere microscopical dots, while those near the upper surface—where the ovary is embraced by the fimbriated extremity of the Fallopian tube during the erethism of coitus, or the orgasm of the menstrual epoch, which their maturation produces—measure several lines in diameter; after the child-bearing period they disappear until not more than four or five, or even none at all, exist. The mistake has occurred of confounding the structural changes that take place in these vesicles during infancy and childhood with the physiological changes that occur at a later period. The former are transitional changes only, preparatory to the formation of the true Graffian vesicle, by and through which changes, it may be, it receives its dynamical energy, whereby it represents all the female furnishes in the reproduction of the species, while its subsequent changes, or physiological activity, are the manifestations of such dynamical energy seeking that harmony of relations whereby the life of the individual is produced.

Physiologically then these vesicles remain during infancy and childhood in an undeveloped state, but rapidly enlarge and approach the surface towards puberty, or—as they enlarge—mature, puberty approaches *pari passu*. At puberty one or more of these vesicles can be seen and felt projecting the ovarian surface, and at, or during, each catamenial period a Graffian vesicle ruptures, discharging an ovum, while the hemorrhage which takes place from its highly vascular walls into the follicular sac forms a corpus luteum. Now, it matters not at how early an age, if at five, or seven, or nine years, this Graffian vesicle matures, ruptures and discharges its ovum, the child will then and there menstruate and rapidly develop into womanhood. This act is indeed the capital part of the menstrual epoch, and, with or without the menstrual flow, the female is capable at that moment, regardless of age or size, of conceiving—has indeed, in this act, furnished her contribution towards the reproduction of the species. Nor will the woman have the resultant menstrual flow, or be capable of conceiving even at twenty-five years of age, should this maturation and rupture of the vesicle be delayed; and during the child-bearing life of the female this maturation and rupture of vesicles takes place with periodical certainty and regularity, and forms its corpus luteum regardless of coition, that is, whether or not the female has connection with the male.

From these facts again we infer, if indeed they are not themselves demonstrations, that menstruation is ovulation, that this ovulation, or egg-laying, is the law of the animal economy, the menstrual flow a concomitant, and that the periodical orgasm has its origin, not in the uterus, but in the ovaries. And hence the menstrual flow is not a necessary, but very general resultant phenomenon of the menstrual period in the human female, announcing by its presence the fullness, the regularity and perfectibility with which the organs respond to the ovarian orgasm.

Our third argument is, that the catamenial period is not peculiar to the human female, but corresponds to the oestrual period in the lower female mammalia. And in these, direct experiments demonstrate such periods to be accompanied, caused, produced by the maturation and discharge of an ovum or ova. The number of these correspond to the number of young the animal produces at a time. Now, as the connection with and dependence of oestruation upon the maturation and discharge of ova in the lower animals is placed beyond doubt or controversy, by the observation and numerous demonstrations of direct experiment, in order that this argument be conclusive, it is only necessary to show the analogy between the oestrual period of the inferior animals and the menstrual period in the human female.

1st. In both this period is periodical, announcing both the aptitude and the season for conception.

In support of this proposition we will first quote Dr. Montgomery, who, at pages 386 and 387 of his work on Pregnancy says; "There is now abundant evidence to satisfy us that at each return of menstruation in women, and of oestruation in the lower animals, a state of greatly exalted action is set up in the ovaries, which is more particularly concentrated on one or more of the Graffian vesicles, in consequence of which their coats are rendered intensely vascular, they become larger, more prominent, and, in many instances, burst and discharge the ovum." "That this is a time at which the sexual emotions and generative nisus or propensity are more than ordinary active, does not, I believe, admit of a doubt; and at this time, or very soon after it, conception is most apt to occur, is, I think, equally proved." In support of this he gives the well-known case where Fernel, when consulted by Henry II. of France as to the best means of rendering his Queen, Catherine de Medicis, fruitful, advised him to visit her only immediately *after* the cessation of the menstrual discharge. The adoption of this advice was attended with success, and the queen, after years of disappointment, gave birth to a son.

Again, Cazeau says, "Admitting the incontestible analogy between the symptoms of heat and menstruation, it will be sufficient to prove that the former is always connected in animals with ovarian evolution, and this fact is proved by certain experiments of Coste and others." It is not, however, necessary to multiply proofs to establish what cannot be denied, that in the inferior animals this is the season of aptitude for conception, and in the human female that such is the case has long been admitted by most eminent accoucheurs. M. Naegele says, "Acting upon this he has relieved many cases of barrenness by advising copulation immediately after the menstrual flow.

2d. In both there is congestion and heat of the reproductive organs, ovaries, Fallopian tubes, uterus and vagina, announced by an increased discharge of mucus, often, more or less, mixed with blood.

This proposition will not, I believe, be denied by any one.

3d. In both this periodical irritation is found to depend upon the integrity of the ovaries.

This has been proved in a previous argument.

4. In both the external flow is found to be a concomitant only, and to agree in their essential features, viz., in woman it is blood mixed with mucus, in the inferior animals it is mucus, often more or less mixed with blood. In this it is seen that the remarked bloody discharge is an accessory feature, belonging not to menstruation as a menstrual act, but to the human female more especially, and not absolutely or necessarily to her, as the act can be, and undeniably often is, successfully accomplished without any such discharge.

Now, as like causes produce like effects, or as like effects flow from the same or like causes, and as the cause in the inferior animals is experimentally demonstrated to be in the ovaries, ovulation, therefore we are compelled to believe that in the human female the cause is in the ovaries—the act ovulation.

Our fourth argument is, that the theory of ovulation accounts for all the phenomena, which no other theory does. Now, by the laws of thought we are not permitted to accept a law incapable of accounting for all the phenomena under it when we are in possession of one fully capable of doing so. Nor are we permitted to multiply hypotheses, or hypothecate causes, when one known accounts for all the phenomena. Now, as stated, and as will be fully shown, the theory of ovulation does account for all the phenomena. Therefore, by an accepted principle in philosophy, we are compelled to accept it as the efficient as well as the sufficient reason.

Our fifth argument is, that this opinion is held as an admitted fact by an overwhelming majority (almost unanimously) of those whose means of observation and eminent scientific attainments most entitle their opinions to respect. In this class, among a multitude of others, may be mentioned Churchill, Bennet, R. Lee, Montgomery, Wagner, Hodge, Meigs, Miller, Dalton, Dunglison, Todd and Bowman, Bedford, T. Smith, Ecker, Janker, Ritchie, Argante, Hirtle, Locatilli, Pouchet, Bischoff, Coste, H. Meckel, Raciborski, Simpson, Cazeau and Kolliker.

Our sixth argument is, that the connection with, and dependence of menstruation upon, the maturation and discharge of a Graffian vesicle in the human female has been demonstrated by the direct observations of a sufficient number of able and scientific trustworthy men to place it beyond reasonable doubt or successful controversy; and, in accordance with this, the theory of ovulation has taken place with the admitted and fixed facts of a scientific and progressive age.

But, as this argument is, if sustained, like that presented by the morbid anatomy of the parts, conclusive, we shall enter at some length in its support.

We first quote Mr. Gairwood, who says, "The ovary of a female who has never menstruated is a soft, pulpy mass, oval in shape, with a regular defined outline, and a smooth, polished, glistening surface. In a female who has menstruated for a number of years the surface is much changed—deep corrugations have destroyed its smooth, oval form, while a mass of cicatrices, irregular and ill-defined, mark and mar its surface;" and this fact I have often observed, and hold myself ready to demonstrate at any time.

His first case was a girl, 9 years of age, who died of Scarlatina. On one of the ovaries was found a Graffian vesicle, enlarged, projecting immediately under the albugineous coat, causing a nodular projection of the ovarian surface. She had not menstruated; had, however, she lived a short time that she would have done so, and that, instead of this enlarged Graffian vesicle, the ovary would have presented a corpus luteum, Mr. Gairwood thinks certain, and subsequent facts reduce this opinion to at least a moral certainty.

His second case—A girl died six hours after the appearance of the menses. On the left ovary there was an oval cavity, large enough to admit a tare, and, no doubt, left by the recent escape of an ovule. Its margin was irregular and flocular, and, as well as the walls, of a deep, red color. This female had menstruated for years, and the ovaries were scarred with cicatrices.

Case third—Emma Bull died with dropsy. Two years previously she had menstruated an only time. The ovaries were marked with here and there an enlarged Graffian vesicle, approaching near the surface. The right ovary presented no scar, but on the left a single cicatrix was well defined.

Case fourth—A young woman died who was known to have menstruated three times only. On one ovary were two well-defined cicatrices, and one on the other.

Case fifth—In a young woman who had menstruated six times, were found five well-defined cicatrices, the sixth not so distinct.

Case sixth—In a young woman, sixteen years of age, who had been regular two years previous to her sudden death, twenty-two cicatrices were counted. The same correspondence was found in numerous other cases, from which Mr. Gairwood concludes the number of menstrual periods correspond with the number of ovulations, and this independent of sexual connections, existing alike in the virgin and the married female—the maturation and bursting of the follicle and formation of a corpus luteum not requiring for its production the stimulus of coition, but connected with the menstrual flow as cause and effect.

Now, it is not contended by us that in all cases where the woman has menstruated for a number of years, a number of cicatrices exactly corresponding to the number of menstrual epochs can always be found. We know that even those cicatrices, following the more persistent corpora lutea of pregnancy, are eventually rendered indistinct, are obliterated by absorption; much more so with these. The argument is, that they are *always formed*, not that they *exist always*. But they are often sufficiently persistent to mark the number of menstruations for the several last periods, and ever after corrugate, mar, the previously smooth surface of the ovaries.

Another highly creditable witness, M. Gendrin, states that his observations convince him that, "during the whole period of a woman's menstrual life, there is a constantly successive development of ovula and vesicles in the ovaries, and that, at each menstrual period, a vesicle, having reached the surface of the ovary, becomes the focus of a peculiar organic action in which all the reproductive organs participate. The *result* of this orgasm is, the vesicle ruptures and the ovum escapes. This rupture takes place regularly, at stated intervals; the result is menstruation or the menstrual flow." M. Gendrin, then, gives the maturation and rupture of the vesicle as the *cause*, the flow the *result*.

Dr. Negrier, Professor of Midwifery at Angers, fully endorses the views of M. Gendrin, and says that, so early as 1830, he held these views, and had repeatedly shown to his pupils the surface development of the ova to their final rupture, as well as the connection with and dependence of menstruation thereupon.

Our next authority is T. L. G. Bischoff, Professor of Physiology at Giessens, and of whose labors the greatest Embryologist of this or any other age, L. Agassiz, says: "never were experiments upon this long-vexed question conducted with more *skill and success to establish the facts beyond question*, and *never were the physiological views derived from them deduced with more accuracy and precision. It is a model in this kind of experiments.*" Those experiments of Bischoff which Agassiz says "placed the matter beyond question," were numerous, and made upon the inferior female mammalia, such as the cow, the bitch, rabbit, rats and mice, and on these animals were so varied as to prove—1st, that the period of oestruation is the period of ovulation; 2d, that the oestrual period was produced, *caused*, by the periodical maturation and discharge of ova; and, 3d, that this maturation and discharge of ova was independent of coitus; and all these facts they did establish beyond a reasonable doubt. He says: "Now from all these observations, it is quite certain that the ova in the mammalia, in the time of heat, no coition taking place, are detached from the ovary, enter the tube and perish there, and that corpora lutea are formed in the ovaries just as though coition and fecundation had been effected."

"If, by the preceding experiments, it has been proved in regard to the mammalia that their genesis and propagation is, *primo loco*, dependent upon a spontaneous, periodic formation and maturation of ova, we are, by analogy, led to suppose the same in regard to the human female, but proofs, at least indirect ones, are not wanting."

"Menstruation in the human female has, for a long time, been compared to the heat in animals. This view has been received at all times by most intelligent physicians and naturalists, though it has been combatted by men not less eminent." These opponents had not then the irresistible proofs which Bischoff furnishes, that in both cases ovulation was the *cause* of the phenomena.

The "greatest objection urged to this view," says Bischoff, by Burdach, whom he considers its greatest opponent, is derived from the then state of the sexual appetite and the admission of coition. "The lower animals will copulate only in time of heat, while man has ever felt himself repelled at the period of menstruation." If this were actually true, then, in my opinion, an essential difference would be established; but attentive observers have before now remarked, and have confirmed it, such a difference does by no means exist; for the female of the lower animals evinces a state of impaired health in the beginning of the heat, and does not admit the male—it is only when the phenomena of heat have been to a certain degree developed that she seeks coition. Now, it is known that with the human female, after menstruation is over, a feeling of improved health exists, and the sexual appetite is particularly manifested. The most complete correspondence is therefore found in this respect."

"Moreover, *all intelligent anatomists, physiologists and physicians have for a long time been convinced that the cause of menstruation*, as well as of sexual instinct, *is in the ovaries;* and that the *uterus*, on the contrary, though by it the sexual apparatuses in the different classes and genera of animals have been typified, is, *in this relation*, *quite* of secondary importance. Numerous cases in pathology the most diverse in character, and numerous deviations from the normal type (malformation), concur entirely in this respect."

"Quite recently direct anatomical proofs of these statements have been furnished. *It now does not admit of a doubt that the ovary, at the time of each menstruation, is in a state of great excitement—that a Graffian vesicle is considerably developed—bursts*, and a corpus luteum is formed in its place. The investigations of Robert Lee, Bateman, W. Jones, Negrier, Gendrin, Raciborski and Pouchet remove from this question *every vestige of a doubt.* I, myself, have had occasion four times to make examination bearing on this point, all confirmatory of the same fact."

"Finally comes the long-known fact, that females conceive most certainly immediately after menstruation, and examples are not wanting where this occurred with some *only* at the time of menstruation. Prof. Nægele has told me that he has never been deceived in regular cases when reckoning nine months and eight days from the last period, and that he had removed cases of barrenness by advising copulation immediately after or even during the flow."

"In the human female, during menstrual life, the maturation and discharge of an ovarian ovule takes place every four weeks, accompanied by a contemporaneous discharge of blood. This periodical maturation of an ovule is the primary and principal condition on which conception and pregnancy depend; at no other period is it possible."

It is seen here that this accurate experimentor does not make the well-being of the fœtus in the least dependent upon the periodical determination of blood to the uterus, which excess, after conception, is turned to the feeding of the fœtus (as still taught by some). Such engorgement is a result, and, with its resultant flow, epiphenomenal.

Again: "It appears that the discharge in the uterus begins while the ovule is still in the Graffian vesicle, and that it is not detached till the cessation of the flow, while in the tube it is probably capable of being fecundated for several days if coition supervene. How long? This can only be settled by direct observations, which are as yet altogether wanting. Thus much, however, I believe, may be received as certain—that fecundation must take place in the tubes (that is, before the ovum has arrived at the uterus), because here, very probably, development begins."

"The ovum of the rabbit remains in the tube three, that of the rodentia four or five, and that of the bitch eight or ten days; as far as we know, then, we may suppose that the human ovum still exists for from eight to twelve days after its discharge from the ovary, and, therefore, that for eight or twelve days after the menstrual flow has ceased the ovum is susceptible of fecundation. I have often been asked if conception is dependent on menstruation, and this on the maturation of an ovum, how is it possible that females conceive, never having menstruated? I answered to this by simply stating that, though the discharge of blood is a normal and easily cognizable symptom of the maturation of an ovum, the latter is, nevertheless, not essentially dependent on it, as a single glance at the animal kingdom proves. This periodic maturation of ova is there seen, both with, and oftener without, such discharge of blood. Menstruation (the menstrual flow) then is, in the human female, an entirely normal and important, though by no means essential, but rather accidental symptom of ovulation. It may be wanting and yet ova mature, and be, therefore, susceptible of development and fecundation. If the human female menstruated but once or twice a year, it would long ago have been remarked that these were the only periods at which conception was possible; menstruation would long ago have been recognized as perfectly analogous to the heat in animals, even though the most important element, *i. e.*, the maturation of the ovum, had not been discovered. As, on the one hand, menstruation occurs every four weeks, and, as conception is so often possible, it was not easy to fix the limits within which it was to be restricted without further observation; and, on the other hand, menstruation passes by so often without its purposes, *i. e.*, conception being attained, it was quite natural that attention should be directed more toward the former than to the dependence of the latter upon it. In animals just the reverse relation opposes a correct appreciation of the analogy between the heat and menstruation. With them the heat occurs either very rarely, once or twice a year; if oftener—as in the cow, the ewe, the sow, &c. the common circumstances and purposes in domestic economy cause that this relation is obscured, either by the fact that the animals are immediately fecundated, or the maturation of the ova is prevented or retarded by lactation. This is the reason why the very remarkable analogy offered by the cow has, for the most part, remained unnoticed. As to the researches of anatomists and physiologists, they have but recently made any correct observations, being previously deluded by false theories. "The proper opportunities for observation on the human female were rare; menstruation, the maturation and discharge of ova, is usually so dependent on the general health that the disturbance of it nearly always precedes death. It is only after death by violence that we can hope, in healthy persons, on dissection, to make observations bearing upon this subject."

I have thus given, at much length, the arguments founded upon his experiments, of this ablest of physiological experimenters, Bischoff. Now, these arguments and experiments are to prove: 1st, that the periodical heat in the lower animals was connected with, caused by, the periodical maturation and discharge of a Graffian vesicle, an ovum or ova, and the formation of a corpus luteum, and this independent of coitus; 2d, to prove that the menstrual period in the human female was analogous to this heat period in animals, and, consequently, that the menstrual hemorrhage was not only coincident with, but dependent upon, caused by, the periodic maturation and rupture of vesicles, discharge of an ovum; 3d, to show that the capital act of menstruation was ovulation, while the menstrual flow was a concomitant only. And all these points we conceive he has abundantly, almost superabundantly, proven; and, as these points embrace fully the matter in controversy before the Society, I might leave the argument with Professor Bischoff; but, lest some should hold to the time-honored views of periodic uterine engorgement, for the purpose of nourishing a future fœtus, &c., we shall, at the risk of being tedious, proceed with other proof.

Dr. Robert Lee, the distinguished Professor of Midwifery, London, so early as 1840, says: "There are certain facts which seem to prove that it is to ovarian, and not to uterine, influence we are to attribute all the changes which take place in the female pelvis, mammæ and uterine system at the period of puberty, and that it is to certain changes in the Graffian vesicle all the phenomena of menstruation are to be referred." In proof that menstruation is ovulation, he gives a number of dissections of women dying during the menstrual epoch, in all of whom recent ruptures of Graffian vesicles were observed. In further proof of this view, he refers to the published observations of Cruickshanks; also, to cases given in Robert Hooper's large work on Morbid Anatomy.

We next quote Dr. Rudolph Wagner, Professor in Goettingen. In his great work on Physiology, "Handwarterbuch der Physiologie," after having shown that the menstrual period in the human female is analogous to the oestrual in animals, says: "If this be the case, then are we forced to the conclusion that it is connected with, and dependent upon, the maturing and casting off of an ovum, as experiment upon the living animal demonstrates this to be the accomplished fact in the oestrum of animals. And, since the works of Pouchet, Raciborski and Bischoff on the co-existence of menstruation and the rupture of vesicles and the formation of corpora lutea; and, since the contemporaneous writings of W. Jones, Lee, Patterson, Montgomery, and others, it has become an established fact that the time of menstruation coincides with the maturing and bursting of a Graffian vesicle. In every case where a married or unmarried woman died during or soon after menstruation, there was found, on dissection, a fully matured or already broken follicle. The labors of Eker, Janker, Ritchie, Arganti, Serres, Hyrtle, Locatelli, Latheby, Coste, H. Heckel, Hainold, Garloch and Dalton confirm this fact."

He further says: "The maturation and casting off of an ovum is independent of the influence of the male sperm, as is proved by cases of occlusion of the Fallopian tubes by disease or ligature, and by cases of imperforate Hymen." He leaves it an open question whether the ovum is thrown off at the beginning, during, or immediately after, the menstrual flow. And this, we will here add, doubtless, happens both immediately before, at the commencement, during, or after, the flow, this depending upon many conditions easily accounted for. And, as we have found that, while the law is, that this maturation or bursting of the vesicles produces the entire phenomena of menstruation, with the menstrual flow, such is not always, or necessarily, the case, as in those cases of conception where a menstrual flow had never taken place. Nor do we see any objection to the supposition that, in its operation, this law may meet an exception in a reverse direction—that is, that, after having excited the concatenation, usually resulting in the menstrual flow, the menstrual exciting vesicle may not rupture at all, but take on a retrograde movement. And, could a single case, or a few rare cases of this nature be cited, it would be no greater argument against the ovulation theory than the occasional existence of tubal or abdominal pregnancy is against the uterus being the natural place for fœtal development.

But what was at the time of most interest in this most varied research and conclusive argument of the learned and philosophical Wagner, was his citation of cases that had been long inferred, but not proven in which the ovum in the Fallopian tubes of the virgin human female, following menstruation, had been actually discovered. The indefatigable Bischoff had seen the ruptured vesicles and corpus luteum; but failed in what he was so anxious to do—to discover the ovum itself. Now, while scores of able observers had placed the coincidence of the menstrual flow and the maturation and rupture of a vesicle beyond reasonable doubt, it was not generally known that the ovum had been actually discovered. And that it should have been discovered at all is rather surprising, as it is of almost microscopical size, and about the time of its escape the Fallopian tubes are filled with blood, and the lining membrane of the uterus engorged, corrugated and bloody. Wagner, however, refers us to several cases where it had been discovered. The first is given by Hyrtle, in his Anatomy of Man, in which he states that he has found the ovum in the Fallopian tubes of a girl fifteen years of age, who died during her first menstruation. Two more cases are referred to by Wagner, published in the Philosophical Magazine, 1851, Vol. II, No. 11. In both cases the Hymen was intact. The girls died during the menstrual flow. Since then several other cases have been published.

Dr. Fleetwood Churchill, in his classical work on Midwifery, endorses the ovulation theory, and, after summing up numerous cases from various authors, "*all of whom*," he says, "agree that in the female, during, or soon after, menstruation, a small, irregular rupture was found in the ovarium, and that this communicated with the remains of a ruptured Graffian vesicle." From all this evidence we are obliged to conclude that there is a periodical ovulation of Graffian vesicles, and that this occurs at a menstrual period. In support of this view his American editor, Dr. Condie, cites a number of cases from different authors.

Dr. Bedford, Professor of Obstetrics in the University of New York, in his work on Diseases of Women and Children, says: "The reason why the physiological function of menstruation does not exist before puberty is, that the *organs of which it is the function* have no physiological existence previous to this time. These organs are the ovaries, the essential and only organs of generation, strictly so-called, in the female. The development of the ovaries occurs at the period of puberty, and then it is their physiological action commences. At this time you will observe on their surface the Graffian vesicle, this latter containing the ovule which I have told you escapes ordinarily with the menstrual blood. As these ovules on the surface become matured, the *ovary itself forms the centre of a sanguineous afflux*, a veritable congestion, in which the Fallopian tubes and the uterus participate. This congestion results in the escape of mucus and of blood, which passes from the uterus into the vagina, and thence escapes externally—and this is menstruation. But why is this function of menstruation periodical? If you examine an ovary in its congested state, you will observe on its surface the matured ovule of which I have spoken, or at least the ruptured vesicle from which it has escaped; examine this organ still more closely, and you will find imbedded in the subjacent tissue other ovules which are not matured, but which, as they approach the surface of the ovary, become so precisely as did the first. So in this way there is, at each monthly crisis, a constant succession of ovules to be observed, which either become fecundated by the seminal fluid of the male, or, in the absence of such influence, escape with the catamenial fluid. This periodical maturation of the ovules continues from puberty to the cessation of the menses. Previous to puberty the ovaries are undeveloped, have no action; after the function has ceased they become atrophied. This similarity of condition of the ovaries before and after the child-bearing age is explained in this way—*menstruation is, as it were, but the result of the ripening of the ovules*, which the female furnishes as her part in the great work of increase.

"The reason, therefore, that her ability to perform this latter duty is restricted to certain limits is, because it is only within these limits, from the period of puberty to the cessation of the menses, that the ovaries are capable of secreting ovules."

Surely this is sufficiently explicit. The whole question in controversy is fully stated and entirely accorded us—1st. The cause of the periodic orgasm is stated to be in the ovaries—ovulation; 2d. The menstrual flow the *result*—a concomitant only—a secondary result: as, first, we have ovarian excitement, which is periodical, secondly, a resultant engorgement of the uterus, and, as the result of this, the menstrual flow. Menstruation is considered, stated, by Dr. Bedford to be the physiological action of the ovaries—ovulation. And, as this is not a question of thought, but of direct observations, the matured opinions and extensive observations of such a man cannot be ignored.

Dr. Hodge, Professor of Obstetrics in the Pennsylvania University, without arguing the question, assents to the theory of ovulation as an established physiological fact.

Prof. Miller, of the Louisville University, in his work on Midwifery, says: "In the human female ova are matured and emitted at the menstrual period, between which and the incalescence of the inferior animals there are many points of resemblance. Ovulation may be performed in exceptional cases without the menstrual flow; but *menstruation* (the menstrual flow) *is so closely dependent upon the ovaria that if they be wanting or dormant, it is suppressed.* Nor is the flow of blood from the uterus the only or principal phenomenon at the ovular epoch. Important changes take place in the uterus; it becomes engorged, turgescent, so that the opposite sides of its cavity are in contact and its membrane thrown into convolutions. In such a condition of the uterus the ovum is intercepted, caught between the mucous folds, and hindered from falling *headlong* to its most dependent part. Should it be fecundated it is in a position safest for the mother and itself; if not fecundated, it will be allowed to pass away, when the orgasm raised for its behoof shall subside."

This testimony, again, is sufficiently unequivocal. To state that "the menstrual molimen is so intimately dependent upon the ovaria, that if these be wanting or dormant it is suppressed," is to give them the relation of cause and effect—the *cause*, periodical ovarian excitement; the *effect*, bloody discharge. And this is the ovulation theory. And, as Prof. Miller makes all the changes taking place in the reproductive organs of the female at and during the menstrual epoch immediately dependent upon the changes going on in the ovaries, his whole testimony is unequivocally in support of our proposition. And the large experience and extensive observations of Prof. Miller entitles his opinions to much weight on a point which, like this, is determined by experiment and observation.

Another important fact in this connection, and brought out by Prof. Miller, is this: That this uterine engorgement, with its resultant eruption of blood consequent on the ovarian orgasm, is for the well-being of the ovum, and not for the future nourishment of the fœtus—"manuring soil for the more vigorous growth of the offspring," as is sometimes taught. Such uterine conditions concern not the fœtus as a fœtus, but are necessary to the well-being of its primordial state—the ovum. Were any refutation of such antiquated, visionary opinions necessary, it would be found in the fact that girls or young women who conceive at their first menstrual epoch, and, consequently, where no such "manuring" has taken place, nor the habit of uterine engorgement been established, are found to proceed in the great work of normal, fœtal development just as well as the woman whose uterus had been so "manured" by its accustomed, regular, periodical engorgements for twenty or more years.

Dr. Bennet, formerly Physician Accoucheur of the Western Dispensary of London, an acknowledged high authority, fully accepts and endorses the theory of ovulation. He says: "To Dr. Pouchet belongs the credit of having been one of the first to broach the doctrine of spontaneous ovulation as a law in the female mammifery, *and also of having established this law in the most irrefutable manner by numerous experiments, and by a close and powerful analysis of all that had been done by his fellow-laborers in this field of observation.*"

"The researches to which I refer, prove in the most satisfactory manner that menstruation is intimately connected with the evolution from the ovary of matured ova, which take place periodically in the virgin as well as in the married female. In the human female the maturation and evolution of ova occur at frequent intervals, and are remarked by the exudation from the uterine cavity of a greater or less quantity of blood. It is evident that the term menstruation ought to be applied to the totality of the conditions that coexist with the maturation and evolution of the ovarian vesicles."

Surely nothing can be more satisfactory than this testimony. Not speculations into the disputed domains of thought or speculative philosophy, but observation, direct observation, of witnesses competent and trustworthy, the experience of men of the highest scientific attainments. And the extensive experience and enlarged observations of Dr. Bennet, first in the hospitals of Paris, afterward in London, with the matured judgment of one who has devoted a life of toil to the observation of the physiological and pathological action and condition of women, we say such a man's judgment on the observation of others tried and proved true, in his own ample experience, can be but little short of conclusive. And it will be seen that Dr. Bennet does not testify alone to the coincidence of the menstrual flow with the maturation and discharge of an ovum, but also to the dependence, connection, of the one upon the other.

Dr. C. D. Meigs, the learned and experienced Professor of Obstetrics in the Jefferson Medical College, says: "A healthy woman matures and deposits an ovum every twenty-eight days, from the age of fifteen to forty-five, failing only during pregnancy and lactation, and sometimes not even then. The *closing stage of this maturing and depositing the ovum is attended with the discharge of a bloody fluid called menstruation.*

The discharge comes from the inner surface of the uterus, which has become engorged in common and along with the ovaries."

Again, in his notes to Colombat, he says: "It seems to be universally admitted that the *substantial cause* of menstruation ought to be sought for in the condition of the ovaries;" and, after quoting in support of this opinion the observations and experiments of Negrier, Gendrin, Lee, P. Dubois, Bernard, Bischoff, M. Jourdan, Baer, Coste, W. Jones, Barry, Raciborski and Pouchet, whose accumulated, accorded, and almost superfluously repeated demonstrations of this fact leave no reasonable doubt, he adds, "In adopting the views of these writers, I find abundant explanation of the paucity of our resources in the use of mere emenagoga, and in the efficiency of constitutional treatment of menstrual disorders, as disorders of the constitution are fully sufficient to the arrest of the ovarian travail by suspending the development of the vesicles." And he fully endorses the statement of Raciborski: "That it is an established fact that the menstrual hemorrhage is but a secondary phenomenon in menstruation, properly so-called, and that the capital act in this function consists in the maturation and the periodical discharge of the ova—the *ponte* (laying). There are women in whom it is confined to this act alone, and authenticated records furnish numerous cases where women have had several children without ever having seen the menses." Now, it is seen that in this argument of Prof. Meigs ovulation is not given as a coincidence only, but a cause—the act—while the uterine engorgement and consequent flow are epiphenomena, not necessarily but generally resultant of the egg-laying orgasm. And, as his treatment for uterine disorders is founded on this view; and, as his vast experience and world-renowned success are demonstrative of the truth of his views, we have, in the matured opinions of the learned Professor, the highest proof of the ovulation theory of menstruation.

Dr. Dalton, in the new edition of his Human Physiology, argues this ovulation theory as one of the best established truths of physiology. He says: "In the human female the return of the period of ovulation is marked by a peculiar group of phenomena, which are known as menstruation." This is his opening sentence on menstruation. No mincing, no doubt, no gradual or cautious approach of a disputed point; but is given as an admitted fact, just as much so as the Harverian theory of the circulation of the blood, or the Copernican philosophy of the heavens, or the Newtonian theory of gravitation. And—just as he might have said, the blood receiving an impulse from the heart, passes out through the arteries to the capillaries, thence to the veins, through which it is returned to the heart—he says, " the return of the period of ovulation is marked by peculiar phenomena known as menstruation." Here the ovulation is everything—the uterine engorgement, the heat of vagina, the weight in the pelvis, the bloody discharge, but effects marking the great act of the ovaries.

In proof of this view Dr. Dalton gives, not only the observations of others, but his own direct and positive observation of the fact. He further says: "The menstrual flow is only the *external sign* of a more important process taking place within, and that this flow is not an absolute or necessary requisite. Provided a mature egg be discharged from the ovary at the appointed period, menstruation, properly speaking, exists, and pregnancy is possible."

Todd and Bowman, in their classical work on Physiology and Physiological Anatomy, say: "The most important of the phenomena accompanying menstruation is the maturation and discharge of ova from the ovary. At these periods a Graffian follicle becomes enlarged, projecting considerably from the surface of the ovary, and distended with fluid. Its walls become thin at one point, where it at length gives way, and the contents of the follicle escape into the Fallopian tube. In animals, the ovum may be detected without difficulty, although it *is only of late years that the escape of the contents of a Graffian follicle at each menstrual period has been placed beyond a doubt.*" "The discharge of ova from the ovary in animals, as in the human subject, occurs only at certain definite periods; at such a time the animal is said to be in 'heat' or 'rut.' If the ovary of the animal be examined at the time of 'heat,' it will be found turgid with blood, and several Graffian vesicles will be seen projecting from its surface, forming prominences, the most superficial portions of which appear thin and almost ready to rupture, and permit the escape of the contents of the follicle; at the same time a more abundant secretion of mucous takes place from the walls of the vagina and contiguous parts. In a few instances, also, a bloody discharge has been detected in the vagina. It may be considered as established, that in the human female, at or about the period of menstruation, a discharge of ova takes place, and at these times the ovaries are extremely turgid, and their vascularity is much increased. From very numerous observations *it has been distinctly proved that conception is more likely to take place a few days after menstruation than at any other period.*

"From these facts *most* physiologists have been led to look upon the menstrual period in the human female as *identical* with those of heat or rut in animals. . . . .

"The maturation and escape of ova, then, in all animals is a periodical phenomenon, and even in the human subject, if not accompanied with, is shortly followed by, increased desire, while in animals sexual intercourse takes place at these times alone."

There can be no doubt here about the existence of the relation of cause and effect between the maturation and rupture of the vesicle and the menstrual flow, either in the opinions of the authors or in fact. We had insisted on the *analogy* between the oestrual period of the inferior animals and menstruation in the human female. Here, upon the authority of most physiologists, they are given as *identical.* In both there is a discharge of ova; in both this state is periodical; in both this is the time for conception; in both there is increased heat and discharge of mucous, sometimes mixed with blood; in both, at or about this time, there are increased sexual desires.

James T. Simpson, the learned Professor of Midwifery in the University of Edinburgh, says: "That the various secondary sexual peculiarities which take place at puberty are intimately dependent upon the changes that take place at the same time in the organism of the female ovaries, seem proved by various considerations."

"When the usual development of the ovaries at the term of puberty does not take place, the secondary sexual characters which are naturally evolved in the female at that period do not present themselves."

"Many facts seem to show that the act of menstruation most probably depends upon some periodical changes in the ovaries, or, rather, in the

Graffian vesicles of these organs or their contents; and, when the function becomes suddenly and permanently stopped in a woman at the middle period of life, without any indication of the catamenial fluid being merely mechanically retained, we may, perhaps, suspect, with reasonable probability, the existence of a diseased state, which has destroyed either successively or simultaneously the functions of both ovaries. In such a case the distinctive secondary peculiarities of the female sex come to give place to those of the male."

Kolliker, in his learned work on Microscopical Anatomy, shows the connections between the menstrual flow and the oestrum of the inferior animals, and the periodical maturation and discharge of ova.

Dr. Ramsbotham, in his System of Obstetrics, says: "Dr. Letheby has detected the ovum in the tube in two unmarried girls who died during menstruation. Thus has been confirmed the suspicion so long entertained that, in the human female, the maturation of ova and their discharge from the ruptured follicles takes place periodically, at the epochs of menstruation."

There is, perhaps, no higher authority upon this subject than P. Cazeau, whose great work on Midwifery has been placed, "by the European Council of Public Instruction of Paris, among the classical works of France." We quote from this work:

"Before the age of puberty the surface of the ovaries is of a light rose color, and is smooth and free from irregularities. In women who have menstruated for several years the surface is rough, fissured, covered with small, black cicatrices, and sometimes with ecchymotic spots." "Until the age of puberty the Graffian vesicles are of small size, and concealed in the centre of the stroma; but at this epoch, some fifteen or twenty of them, which appear more advanced than the others, increase in size and approach the external surface of the ovary. At the time when the young girl becomes nubile, one of the latter vesicles seems to have received a great increase of vitality; it undergoes a remarkable hypertrophy, and forms a projection upon the surface of the ovary; this projection becomes greater and greater until, after some days, it forms a tumor of the size of a cherry, or even of a small nut upon the ovarian surface. When, at last, it has arrived at its full development, the ovarian capsule appears to remain stationary, until an over exertion, produced either by the maturity of the ovule or by sexual intercourse, occasions its rupture."

"The evolution just described, which is terminated by the rupture of a vesicle and the spontaneous expulsion of an ovule, is not an isolated fact; on the contrary, it excites numerous sympathies in the remainder of the generative apparatus, and throughout the organism of the female."

"The *ovary* which produces the hypertrophied vesicle is notably enlarged. It is of a deep red color, and its vascular apparatus is remarkably congested. The *Fallopian tube* itself shares in the congestion, being often of a violet red color, especially at its fimbriated extremity, which has a sort of velvety appearance. It is also endowed at this epoch with a special erethism, in virtue of which it applies its floating extremity upon the ovary in such a manner as to secure the ovule and to conduct it into its cavity."

"The *uterus undergoes such important changes that, before the discovery of spontaneous ovulation, it was erroneously supposed to play the principal part in* *the phenomena we are about to study.* While the ovarian vesicle is undergoing the rapid evolution which we have first described, the vascular apparatus of the womb becomes developed and injected in a remarkable manner. The entire volume of the organ is increased, the neck is tumefied, and its orifice narrower; the lips of the os tincæ are warmer and their color deeper, and its mucous membrane so much engorged by the development of its vessels and glands that it is thrown into folds or circumvolutions, which are so pressed together as to leave no vacant space in the organ.

"This great vascularity of the mucous membrane, and the high vascularity which the entire organ undergoes, is at first accompanied with the exudation of a few drops of blood, which, by admixture with the vaginal mucous, which is itself, at this period, increased both in quantity and fluidity, gives it at first a very thin and bright reddish hue; after two or three days a flow of blood, derived principally from the superficial network of the mucous membrane, takes place, escapes through the neck—mingles with the vaginal secretion. Henceforth the effusion presents all the characters of a true hemorrhage.

"It is impossible, in the present state of our knowledge of the subject, to determine precisely at what moment during the flow of blood the rupture of the Graffian vesicle takes place. The result of numerous autopsies admit of the supposition that this moment is variable, *and the curious experiments of M. Coste leave no doubt whatever as to the influences which venereal excitement is capable of exerting upon it. This influence is so great that it may determine the rupture of an hypertrophied vesicle which, without sexual intercourse, would have remained intact for several days longer.* However, it may be admitted as a general rule that the rupture occurs during the last days of the flow.

"The series of phenomena of which the ovary is the seat is not terminated by the rupture of the vesicle." Here follows a description of the *corpus luteum*, which the author justly states to be formed by an effusion of blood into the ruptured wall of the Graffian vesicle, and to follow, as a law, every menstruation, regardless of conception or coitus. This law, as we have seen, may, like all other general laws, meet an occasional exception in its operation. For instance, the enlarged vesicle may be ruptured some days, perhaps ten or fifteen, before the time of its spontaneous rupture, by the stimulous of coitus, be impregnated, and the menstrual flow thus prevented. In this case the *corpus luteum* formed would be known as a *true corpus luteum*, differing in no particular from those following menstruation, except that, the local engorgement being more persistent, the *corpus lutem* is better developed, more persistent, or it may happen, as stated in another place, that the Graffian vesicle, after, through its maturation, exciting, as our author truly says it does, the secondary pheaomena with the resultant menstrual flow, may finally undergo degeneration and not rupture, discharging an ovum, at all.

Cazeau continues: "Toward the age of puberty the ovary becomes the seat of an active congestion, and, it might be said, of a new vitality; all the living powers of the organ seem to be concentrated on one of the Graffian vesicles, which suddenly assumes a considerable development, and in so doing raises the envelope of the ovary and forms a tumor, which is superadded to the organ. The walls of the vesicle become weaker and weaker as their distension increases, until they finally give way; in consequence of the rupture the ovule is expelled, and carries with it a portion of the granular fluid with which it was surrounded. This expulsion constitutes the phenomenon known of latter times as *spontaneous ovulation.*

"As accessory phenomena, it is known that the uterus and its annexes participate to a greater or less degree in the ovarian activity. Our attention should be directed to the great resemblance between this succession of physiological acts and the series of phenomena which comparative physiology and anatomy have shown to take place in mammalia at the rutting season. In them, likewise, the approach of the male is not necessary to the discharge of the ovule, and the spontaneous ovulation is accompanied with almost identical changes in the genital organs, and manifests its influence upon the entire organism by the same assemblage of phenomena. In the human female, as in mammalia and birds, the spontaneous ovulation, accompanied with the same cortege of symptoms, occurs at more or less regular intervals. In the rabbit it is a tumefaction and almost varicose injection of the vulva. Finally, in the monkey a more or less abundant hemorrhage occurs, which, in the case of the macaquæ and the cynocephalæ, coincides with a monstrous swelling of the vulva.

"The vesicular evolution, accompanied with the array of phenomena just described, is repeated at intervals, which vary with different animals; but in the human female recurs at much shorter intervals. Every month, in fact, in the normal condition, a new Graffian vesicle is found to increase in size, to become excessively distended, and finally bursting and discharging the ovule, to become the seat of successive transformation presented by the corpus luteum. Every month, therefore, this curious phenomenon of spontaneous ovulation is renewed, and the dark-colored cicatricula of various forms which are observed upon the surface of the ovary of nubile women give rise to the supposition, exclusive of direct observation, that the operation of which they are the consequence must have recurred a great number of times.

"Of the phenomena which we have just described, the flow of blood had, until of late years, chiefly claimed attention. *This flow, as well as the vesicular evolution of which it is a consequence,* occurs for the first time between the ages of twelve and fifteen years. This periodical excretion constitutes menstruation, a phenomenon, which, though doubtless of importance, is nevertheless far from being the *capital fact* amongst those which we have studied, for it may be absent without the ovular changes being notably affected thereby, whilst, on the other hand, it never appears without having been preceded and accompanied by the development of a Graffian vesicle. *It* (the menstrual flow) *is, therefore, a secondary phenomenon, intimately connected with those which are accomplished in the ovary.* Its first appearance, *which is always determined by the ovarian evolution, of which it is one of the epiphenomena,* reveals the aptitude of the female for fecundation."

In proof of our statement, that no matter at how early an age a child's Graffian vesicles matured and ruptured, she would then menstruate, Cazeau says; "Rejecting many cases of precocious menstruation, there are some whose genuineness is undoubted, inasmuch as the appearance of the discharge was attended with all the attributes of puberty. Thus Dr. Susewind knew of a child of seventeen months which had menstruated since she was a year old, the hemorrhage returned regularly every month, and the breasts and mons veneris were those of a girl of fourteen or fifteen years old. The child observed by Lenhossek menstruated when nine months old, and at two years she presented all the external signs of puberty. The girl mentioned by D'Outrepont, who had four teeth when two weeks old, was regular from the age of nine months. She had at that time long, black hair and prominent breasts. A woman observed by Carus menstruated when two years old, became pregnant at eight, and died at an advanced age."

"These premature menstruations are certainly due to the same causes which determine their appearance in most women about the age of fifteen years. Being always accompanied by the development of the breasts and the other marks of puberty, *they are the evidences that, under the influence of an anomalous vitality of the ovaries, the Graffian vesicles have undergone a very precocious development.*

"Few questions have given rise to more lively discussion than the *cause* of menstruation. I think it is useless, however, to mention here the numerous and more or less whimsical hypotheses which have successively appeared in reference to it. The fact is, that after having read all that has been written on the subject, the mind rests satisfied in its ability to refer this singular phenomenon to one unchangeable and *easily verified fact*, namely, *the successive evolution of the Graffian vesicles*. We owe this satisfactory explanation to the admirable labors of Negrier, Coste, Pouchet, Raciborski, Robert Lee and Bischoff.

"*That the cause of the menstrual discharge is the evolution of a Graffian vesicle* would be an indisputable proposition, provided we were able to show—1st. That the examination of women who died during or shortly after the menstrual period had uniformly revealed the above-named changes in the ovary; 2d. That the absence of ovaries involved of necessity the absence of menstruation; 3d, and lastly, That there is a complete analogy between the anatomical and physiological phenomena of the heat of animals, and those which accompany menstruation (the menstrual flow) in the human female." And all these propositions Cazeau thinks can be, and are, established beyond reasonable doubt or successful contradiction. In proof of the first he says: "1. Since attention has been directed to this subject, no one has succeeded in instancing the case of a single woman who died at the menstrual epoch, whose ovary did not present a vesicle in a greater or less degree of development, or else one which had been already ruptured. The facts related by Coste, Negrier, Pouchet, Raciborski, and others, are now too numerous to reproduce in a work like the present. I, myself, might add, if necessary, a considerable number of cases to the others. This universal coincidence affords, at the very outset, a very strong probability of the relation of causality, which we wish to establish; but it would become an absolute certainty were it possible to prove that the absence of the ovaries involved, of necessity, the absence of the menses." And this, Cazeau thinks has been done—first, by experiments on animals, when it is found that the removal of the ovaries destroys forever all symptoms of heat; and, second, in instances in the human female where the ovaries were absent or had been removed, as in Potts' case, or in the Padjeras of Asia examined by Dr. Roberts. But this has been fully shown in our second argument.

"3. Admitting, finally, the incontestible analogy between the symptoms of heat and menstruation, it will be sufficient to prove, in order to deduce therefrom a favorable argument, that the former is always connected in animals with ovarian evolution. Now certain experiments do not allow of hesitation. By these it is in fact proved (Coste) that the females never enter heat except when the preparation for the spontaneous evolution is going on in the ovaries. Menstruation is, therefore, intimately connected with the evolution of the ovarian vesicles, *and it cannot occur without it; and every time that it appears we may feel entirely satisfied as to the existence of the vesicular development.* But, as an additional phenomenon, the uterine hemorrhage may be wanting without hindering, in any degree, the regular march of the process going on in the ovary. In a word, the spontaneous ovulation, which ordinarily gives rise to an exhalation of blood from the internal surface of the womb, may have its influence restricted to the ovary alone, and to assume the non-appearance of the menses as a ground for denying the aptitude of conception would be incurring the risk of frequent deceptions. Thus it happened that science possesses numerous examples of young girls who became pregnant before they ever had menstruated, as also of women who had conceived, notwithstanding a suppression which had lasted for several months.

On the other hand, Cazeau mentions what we have already stated, that the menstrual flow does not always and necessarily imply that the matured follicle had actually ruptured, discharging its ovum, as, after having established the movement by its evolution, the matured vesicle may remain stationary for some time, and finally abort without rupture. Now, in such a case as this, how long as it possible for this menstrual, exciting, stationary vesicle to retain its vitality? May we not suppose the stimulus of coitus could cause its rupture, and that it might be fecundated at any time previous to the next menstrual period?

We have given at much length Cazeau's views—first, because our sixth argument appeals to authority; second, because no human testimony can be of more importance upon this subject than Cazeau's; and lastly, because of the lucid and conclusive manner in which he has treated it.

In contending for the maturation and discharge of an ovum in the human female at well defined and regular periods—say every four weeks—as a general law, and this independent of coitus, we would not be understood to assert that such maturation and discharge cannot take place at any other time. To the contrary, we find it occurring in some women every three weeks or oftener, in others not oftener than every six weeks. Indeed, knowing the influence of disturbing forces upon our organism, it would be perhaps impossible to suppose that this alone should move on with unerring determination to the excitation, induction and conduction of a uniform concatenation of phenomenon, consequently we are prepared to admit, indeed, expect, that a menstrual, exciting, Graffian vesicle may produce the uterine engorgement and consequent flow, even before its full maturation and discharge, which may not actually happen for some ten or fifteen days afterwards. And even then be produced by the erethism of coitus, or that its maturation and discharge might happen with the production of so little sympathetic disturbance that the flow should not be produced thereby, or that a protruding vesicle, though not fully matured and ready to drop as ripe fruit from its stem for yet ten or fifteen days, may yet be viably matured and caused to rupture, discharging its ovum by the orgasm of coitus, just as a fœtus that would not be fully matured in a less time than nine months, may yet be cast loose and live at seven months. For this reason, while it might not be advisable for a woman desiring offspring to have connection with her husband only at a time midway between her catamenial periods, yet it might not be safe for one who did not wish to conceive to have connection at such time.

There is another reason why a woman, regular every four or six weeks, might conceive at a time remote from such period, which is, that the male spermatoza, under favorable circumstances, live for an unknown time after ejection, and, under favorable circumstances, the female germ live an unknown time after the rupture of the vesicle and its discharge from the ovary, and, for all we know to the contrary, these might meet in the Fallopian tubes, and fecundation take place many days, possibly twelve or fifteen, after such ejection and discharge. That such is not the usual condition, conception most generally taking place within, perhaps, a few hours after coitus, we readily grant, and would only insist upon so great a time as a possible phenomenon, which, in our present state of knowledge, cannot be certainly established or disproved. But this suggestion is not the mere, unfounded supposition of a conceivable possibility, but derives support from the general belief of physiologists and embryologists, that fecundation of the ovum is possible at any time during its passage through the Fallopian tubes—that is, at any time previous to its arrival at the uterus, or even in the womb. This latter may be possible, but the fecundated ovum would be lost, and pregnancy would not follow. Now, granting that this view is correct, that conception and pregnancy are possible at any time during the passage of the ovum through the tubes, then the supposed *possibility* of conception taking place twelve or fifteen days after its discharge from the vesicle becomes a *probability*, if not an absolute certainty, as direct experiments upon the inferior animals prove that a time, varying in different animals, of many days is required for the passage of the ovum through the tubes. In the rabbit it remains in the tubes three days, in the rodentia from four to six days, and that of the bitch for eight or ten days; while in the deer the ovum requires for its passage through the tubes into the uterus, according to Bischoff and Dr. Ziegler, several months. And, without granting so great a time as the latter in the human female, it is altogether reasonable to suppose, with Bischoff, it may be fecundated ten or twelve days after its discharge. Now, to add to this the demonstrated fact that it may not, often is not, discharged until four or six days after the menstrual flow, and we have conception at any time between the periods reduced to a normal condition. So that conception taking place at any time, such as twelve or fifteen days before or after the menstrual flow, indeed at any point of time between the menstrual periods, is no argument whatever against the theory of ovulation.

In this viability of the ovum, and possibility of its being fecundated during its passage through the tubes, we have the explanation of the fruitfulness of the Jewish women, in despite of their religion, which forbids sexual connection until *six* days after the flow, and the Maltesemedan women, whose religion forbids such connection until *eight* days after the flow. Here nature in her *latitude* and the *plenitude* of her provisions for the preservation of the species stretched beyond the ignorance and superstition of law-makers.

And while, as a great general law, the human female begins to mature and cast ova at fifteen years, and continues to do so for thirty years, or until forty-six years of age, yet she may mature them as early as three or five years, and the process may cease before she arrives at thirty-five, or continue until sixty or seventy years of age.

But so much are we what we are, not because of our organism alone, but thus impressed, modified, by our surroundings, that while women in temperate and hot climates may begin to menstruate, mature and deposit ova at nine years of age, and continue regularly to do so some thirteen times a year during their entire menstrual era, in Arctic regions they do not usually commence before eighteen or twenty years of age, and then often menstruate only three or four times a year. During their long, cold, dark seasons, the females of Lapland rarely menstruate oftener than every eight or twelve weeks, and then the ovulation is attended by, productive of, a much less external discharge (hemorrhage) than with their more salacious, more fruitful sisters of the tropics. With animals as with plants, warmth and moisture favor reproduction, promote ovulation. So much is this the case that animals and plants that reproduce but once a year in cold climates, do so as often as twice or three times in hot ones.

But while it has been seen that the menstrual flow, or hemorrhage, is but an epiphenomenon, an important, but by no means a necessary, concomitant of the menstrual epoch, which may be, and often is, absent without detriment to the economy or loss to the true object of menstruation—reproduction of the species; such is not the case with the true menstrual function, ovulation, as the loss of this necessarily involves the loss of the species. And so entirely is the great work of the reproduction of the species made the end and aim of the female organism, that every charm which she possesses, either physically, morally or mentally, is the result of her ovarian force. It is this that builds, or has built, the mammæ, expands both pelvis and chest, softens the voice, arouses the dormant uterus, and throws around the female organism that symmetrical outline characteristic of the full physical perfection of woman. Hence no stroma force, no sexual development, no sexual moral feelings or psychological manifestations. Without this ovular force the reproductive or sexual orgasm remains unknown, does not exist, and the female remains a child in mind as well as in physique, without any more idea of the force or poetry of love than one born blind has of color. Hence organism makes mind or soul, or this is the differentiated force of organism!

With this materialistic view of this materialistic subject, we have removed from this important function—important because necessary in the reproduction of the species—all the metaphysico-theological mystery, which ignorance and superstition alike combined, had thrown around the reproduction of the species, the formation of humanity. As by this it is seen that man, like the acorn or the tadpole, is the outgrowth of a primordial embryo cell, which is the product of the union of two opposite sexual cells. That the female furnishes as her part of the great work of reproduction germ cells, eggs, one of which is matured and laid every twenty-eight days, which laying is usually announced by certain symptoms called menstruation. That this egg possesses, most likely, the constructive material of the organism, and, by union with the sperm cell of the male, has imparted to it the constructive, dynamic, energy of the organism, whereby like, from inexorable necessity, builds up like, could not, under the present condition for which alone it is adopted as a law, build up any other than a like organism, as it possesses only the necessary conditions for this, and the means provided for the union of the cells are just such as inexorable necessity requires from the habits and habitats of the animals. In the fish, where the germ cells are deposited in the water, and the male sperm cells in the surrounding fluid, the chances that any two cells shall come in contact are very small. Here the superabundant quantity is exactly as the chances of such union, together with the chances, again, that such fortunate embryo cell will, under its unfavorable surroundings, be developed into full-grown fish; and, as these make the probabilities almost infinitesimal against any individual egg becoming a full-grown codfish, all these are met by the *nine millions* of such eggs deposited by the fish. Now, in the mammalia, the adapted organism and its surroundings are such as to bring the probabilities of any such individual egg much closer; and here the number of such germ cells are much less. Finally, in humanity, the adapted organism and its resultant psycological forces are such as to render this probability comparatively almost a certainty, and here but one egg is prepared at a time. Yet, even here the probabilities are decidedly against any individual egg; consequently, lest the perpetuation of the species might be jeopardized by this paucity in numbers, the time of laying is reduced from once a year to every twenty-eight days. Now, when understood, as we see it may readily be, and when deprived, as it thus is, of the unnecessary mystery which has been designedly or ignorantly thrown around it, generation or reproduction of the species, even of the highest known, as man, is no more monstrous, miraculous or mysterious than respiration, nutrition, or indeed any other vital phenomenon.

Health of Galveston—Yellow Fever.

About the 1st of July we had a case of yellow fever in the City Hospital, and we have had from four to ten cases at a time for the last two weeks—two deaths from black vomit, and one which indicated it in the colon and intestines generally. In all these cases the spleen was softened, and easily torn, being of a redish disorganised mass. Stomach much injected with spots of ecchymosis. Liver natural in one and gall bladder with little bile. The other two much enlarged, and gall bladder full—distended with vicious, black bile. In first case bladder full of urine—in the other cases only a few ounces. The first case was not suspected of being yellow fever, as he had had two distinct paroxysms of fever; I was giving him quinine, to keep off the third, when he commenced to vomit black matter, and did so until he died. The second case was in hospital for a severe injury below his ribs on the right side, which had produced a severe contusion. I did not see him until he commenced to throw up black vomit, as I was sick when he was taken with the fever, and he did not receive any treatment but for the wound until he commenced to vomit. The third and last case died this morning, July 23; was very yellow when he came into the hospital, and continued so until he was buried. He passed a good deal of black matter through the bowels, and vomited a dark greenish matter for twenty-four hours before he died. He was partially delirious, and moaned and screamed during that time in a pitiful manner. The omentum was very black and injected; free from serum; also the intestines were dry, and the colon filled with a dark redish matter. There have been, in all, twenty-four cases diagnosed yellow fever. All have recovered or are convalescent except these three.

There have been several cases in the U. S. Hospital, and some three deaths, and cases are still occurring. As to the history of the disease in Texas, I would refer the reader to the May number of last year, and to the following, from the "Civilian and Gazette," of July 6th inst, and for the treatment and character of the disease. So far, I only remark that there are a much larger proportion of yellow cases, there being seven in the twenty-four. The disease yields readily to judicious treatment. It has occurred at least one month earlier this year than usual. It is, no doubt, epidemic at Indianola, and will be in all our cities along the coast before winter.

"Are we to have an epidemic? seems to be the main question in Galveston just now. Those who have never seen yellow fever are about as well able to answer as those who have been a life-time here and seen it in all its phases. We have seldom known a season, in which cases did not occur exhibiting characteristics of yellow fever; yet in thirty years we have had but eight epidemics, occurring without any regularity as to intervals of time or appreciable regard to wet or dry seasons. The earliest appearance of cases in epidemic seasons was July 5, 1844, and the disease has become epidemic after the 1st of October, in 1846. The first epidemic occurred in 1839.

So far as the statistics of mortality from the disease, and the periods of its recurrence here are concerned, they are, as nearly as records have been preserved, as follows—each visitation lasting about three months, except that of 1844, which was unusually malignant, and seemed to exhaust the whole population liable to attack in about six weeks:

Year.	Disease recognized.	No. of Deaths.
1839	20th September	about 250.
1844	5th July	" 400.
1847	1st October	" 200.
1853	9th August	official 535.
1854	4th August	" 404.
1858	28th August	" 373.
1859	17th September	" 182.
1864	1st September	" 259.
Total, in eight epidemics, 30 years		2,604

The number of recoveries cannot be so accurately stated, but the general estimate is that one person dies, on an average, to between three or four cases. In the early epidemics but few children or negroes, and, comparatively, but few ladies died. Since then the distinction has been less marked.

The longest intervals between epidemics was from 1847 to 1853, six years. The severe epidemic of 1853 was followed by one almost as severe in 1854, the first case in which fever occurred two years in succession. The last visitation was in 1864, when the deaths were divided as follows: Soldiers 111; blockade runners 4; citizens over 10 years of age 63; children under 10 years 63; negroes 16.

We have no means of ascertaining the proportionate number of each class exposed to attacks. The mortality was probably greatest among the soldiers, as only a portion of those on the island were exposed to the contagion. The heaviest loss of a regiment was 31 in the 2d Texas; the regiment being much below the standard. Wilkes' battery lost 14, probably the greatest proportionate loss.

The number of inhabitants considered, the visitation of 1854 was, doubtless, the heaviest the city has ever suffered. The greatest number of deaths which ever happened in one day occurred then, and amounted to 26. The next highest number in a day was 18, Sept. 12th, 1853. The greatest number in a day in 1864, was 14, on the 24th of September. The disease has sometimes lingered till late in December, but only when it broke out late.

We have always reported promptly the first appearance of yellow fever in our midst, as those who wish to leave the city in order to avoid it should not wait until there is danger that they have contracted the disease. It is progressive, and the number of cases usually increases until the epidemic is about half over, and then gradually diminishes, many of the last cases being among returned fugitives who get over their fears and return before the air has become pure. As to remedies and modes of treatment, we can only repeat, what we have often said, that we do not believe that there is, in general use, any better or safer mode for its treatment than there was a hundred years ago. Good physicians and good nurses save many lives; but it is impossible, and ever will be, for all patients to have these; and quacks and injudicious or neglectful attendants, and imprudence in the sick and convalescent, cause more deaths than the judicious prevent.

The idea that yellow fever will ever wholly disappear has but little foundation. We do not believe there is a spot on the coast of the Gulf of Mexico, or in any of the country near the coast, which is not liable to visitations of yellow fever. The only compensation this city has found for these visitations is the extreme healthfulness at other times, and particularly for a year after the fever has prevailed. It seems to forestall every other disease and pick out in advance all who would have died from other causes, including a large number of those whose systems have been undermined by intemperance. As a general rule, however, the disease respects no one save such as have already had it; and they are not always spared.

The health of the city was never better, and its sanitary condition is better than it ever was. Yellow fever may not become epidemic in the city, as we had eleven cases last year without any in the city. But every one must have observed the resemblance of this summer to that of 1853, preceding the great epidemic. The rains have been the same, and the disease has been quite prevalent in the West Indies all the winter.

We have, as yet, not seen or heard of any cases of cholera in this city this summer, but as it is in New Orleans and along the Mississippi river, we may expect it again in a sporadic form; but, as we expressed ourselves last year, *it will never be epidemic in Galveston;* owing to our having to use cistern water entirely.

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Our Journal.

Some of our exchanges seem to think that we are dead, as there is being started another Medical Journal in Galveston; but we wish it distinctly understood that we will never die, unless we die from inanition. Our enterprise is an independent one, entirely personal to ourself, but we want contributions and sustenance from all—and we are pleased at the number of original articles from physicians of our own State in this number. We will send out a list to all patrons, with our next number, with all credits so far received, and we hope that all will remit who can, before we make up our list. One thing we do object to—that after we have sent the Journal for six months, to have it *returned.* True there are only about twenty, in all, out of one thousand copies sent. We intend to continue in our old style, and we send copies to all, and are not at all disappointed if returned in time to forward them to others who may wish to read them.

Let us hear from one and all. Send on your contributions. Get up your societies, Boards of Health, &c. And we specially request physicians, wherever cholera or yellow fever prevails, to keep notes and send us their experience. Build up for yourselves a name, and especially assist in the medical history of your State.

Books, Pamphlets and Journals Received.

JOURNALS REGULARLY RECEIVED:

American Journal of Dental Science, Baltimore; July.
American Naturalist, Salem, Mass.
Atlanta Medical and Surgical Journal; May, June and July.
Boston Medical and Surgical Journal; May 2, 9, 30, June 13.
Buffalo Medical and Surgical Journal; April, May, June and July.
Braithwaite's Retrospect; July.
Detroit Review.
Medical and Surgical Reporter, Philadelphia; July.
Medical News and Library; July.
New York Medical Journal, Vol. III, Nol 1.
Nashville Journal of Medicine and Surgery, July.
Richmond Medical Journal, July.
Southern Medical and Surgical Journal, July.
Southern Journal of the Medical Sciences, July.
St. Louis Medical and Surgical Journal, July.
The Medical Record, New York, July.
The Medical Reporter, St. Louis, July.
The Dental Cosmos, July.
University Journal of Medicine and Surgery, June and July.
Zeitschrift fur Practische. Heilkunde. June Nos.
The American Journal of Medical Science, Philadelphia, new series, July.
Phrenological Journal, N. York.
The Druggist's Circular, July.
Chicago Medical Examiner, July.
Chicago Medical Journal, July.
The Agriculturalist, N. York, July.
The Eclectic Journal of Medicine, July.
The Medical Investigator, July.

METEOROLOGICAL TABLE FOR AUGUST, 1865, AT GALVESTON.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SUN RISE.	1-3P.M.	SUN SET.	MEAN THER	CLOUDS.		RAINS, FOGS, &C.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P. M.	A. M.	P. M.	NIGHT.
Tues.	1	11..16..	14.09.09	30.12	E1-2....E2-4	E2-4..E2-4..E1-3	81	88	85	85	cucc5... cc3	cc5.....cc3			shr
Wed..	2	09..16..	15.13.09	30.13	E1-3...sE1-3	E1-3..E2-4..E1-2	79	87	85	84	cucc7...cucicc6	cicccu6..cicucc7.cuci5			shr
Thurs	3	08..17..	16.10.10	30.12	0...sE1-3...E2-4	0....E2-4....s1-0	78	92	82	84	cuci5....cu8	cucc9...cucc9...cuccc	ths to NW	sh..shz..sh	shr
Fri...	4	10..15..	14.09.08	30.12	0.....E1-3	E1-3..E1-3..E1-0	77	86	83	82	cuccci5..cucc8	cuccist5cucist4cccist5	R 0.02	ths	
Sat...	5	09..16..	15.14.12	30.12	0.....E1-2	sE1-2..s1-2..E1-2	76	83	81	80	cucc7...cuccst8	cuccs9cucistr8 ciccstr7	R 0.03 spr		
	6	13..16..	16 07.08	30.12	0..sw2 4..NW1 2	E1-3..E1-3..E1-2	80	87	83	83	cucc3...cuccci4	cucc3....cc3.... cucc2	shr		
Mon..	7	10..14..	13.06.07	30.10	0... N1-2... N1-2	N1-2.E1-2..s1-2.0	78	90	84	84	cucc3....cucc3	cuccci3..cccu2.cucist3			
Tues.	8	07..15..	14.09.07	30.11	N1-2....N1-2	E1-3..E1-3...s1-2	78	90	85	84	cucc6....cucc5	cucc3...cucc2....cu1	ths to SE&S.		
Wed..	9	14..16..	15.12.08	30.12	0......s0-1	sE1-3.sE1-3..s1-2	79	90	96	85	cc2......cc5	cu2....cu2....ci2			
Thurs	10	10..15..	14.08.06	30.11	0...... s1-2	s1-2...s1-2...s1-2	79	90	85	85	cicc4....cuccci5	cicu4...cicu3.. .cicc3.			
Fri...	11	07..09..	07.04.00	30.04	0.... sw1-2 0	E1-3..sE1-3..s1-2	79	90	86	85	cu2.....cucc4	cu3.. .cucc2.....cc1			
Sat...	12	01..06..	04.00.97	30.01	0.......0	E1-3...s2-4..s1-3	79	91	85	85	cucc3.....cu5	cucc3..cucc3..cucc1..			ths to NW..
	18	04..08..	08.04.05	30.06	0.....sE1-2	E2-4..s1-2...s1-2	79	89	83	84	cucc5....cccu4	cccu3....cc2.... cc1..			
Mon..	14	10..16..	16.11.08	30.12	0......s1-2	s1-3 ..E2-4.. E1-2	80	90	85	85	cc3.....cucc3	cucc3..cccuci3.. cccu1			
Tues.	15	14..16..	15.08.05	30.10	0..... w1-2	E1-2.. s1-3.. s1-0	81	91	86	86	cccu2...cccust4	cucc3.....cuci3....ci1			
Wed..	16	05..08..	05.00.96	30.02	sw1-2..w1-3	N1-3 s1-3 s2-4 s1-2	78	97	87	87	cccu4.....cc2	cuci3...cicu3..cuci6..	th hazy	shr .....ths	
Thurs	17	02..06..	05.97.96	30 01	NW1-3...w1-2	NE1-3E24sw25s12	80	94	86	86	strci2.....cc2	cu2....cucc4.... cucc9		ths....ths..	
Fri...	18	02....07	07.02.99	30.03	N1-3 . ..N2-4	N1-2..N1-3..E1-0	79	94	86	86	cuccstr3.....cucc2	cuci2.....cc1.....cc1.			
Sat...	19	99....07	06.01.99	30.03	N1-2....N2-4	NE1-3.E2-4.sE1-2	79	92	85	85	custr2.....cc1	cucc2..cccicu3.cicust7	hazy		ths to SE..
	20	03..08..	07.04.03	30.06	0......E1-3	sE1-3.sE2-4.sE1-2	79	90	85	85	cucistr2..... .cuci7	cccuci7.cccuci4.cicc6.	hazy		ths to S
Mon..	21	05....09	07.05.99	30.04	0......E0-1	E1-2....s1-3.....0	74	87	84	82	cucc8...cuccstr3..	cucc3..cccu2..cccu2..	ths to E		
Tues.	22	04..07..	06.01.97	30.02	0......s1-2	sE1-2. sE1-3. s1-2	80	91	85	85	cucc5...cccustr5..	cuccci4.cicust8. ciccs8			
Wed..	23	97..04..	03.00.95	29.99	sw1-2...sw1-2	E0-1.. s1-3...s1-0	80	88	85	84	dciccsts8..ccstr9 .	cccu9.dcicucist8.dcist8			LtoNw&SE
Thurs	24	02..07..	07.00.04	30.04	N1-3....N1-3	NE1-3. E1-3..E2-4	79	80	81	80	cicustr7.. dciccst9	ccncu10..cccu10.ncc10	th to SE.	spr.R.0.15.	spr
Fri...	25	07....12	08.11.06	30.09	NE2-4....N2-5	N2-4. E3-5. NE2-4	75	75	74	75	n10......n10	n10....n10....n10	shrs 0.93 shr.	shrs2.20 0.98	R——0 35..
Sat...	26	07.14.11	12.08.07	30.10	3-5....N2-4	NE2-4. E2-4. E2-4	74	77	77	76	ncc10....n10	ncst10..ncccu10.ncc10	R——		
	27	06....12	08.06.05	30.09	N2-4....N3-5	NE2-4.N1-3.NE1-2	75	85	80	80	cc9......cc8	ccci7..cuci4..cicust5 .			
Mon..	28	04....08	05.01.96	30.02	N1-2... NE1-3	NE1-3...NE1-2..0	74	89	80	81	cu1......cu2	ccs1....ccs2....cc1			
Tues.	29	95....99	96.93.91	29.95	NW1-2..NW1-3 ..	N1-2....0....s0-1	74	89	83	82	cc1.......0	cu1.....cu1.....0			
Wed..	30	91..97..	98.96.95	29.94	NE2-4..NE1-3	E1-2.0 N2-4.0 N1-3	76	[illegible]8	80	81	cccistr7....cc5	cucc6..cuci8...cuccst8		shr. ..shr.	
Thurs	31	00. ..08	...04.04	30.04	0.....NW1-2	s1-3.. s1-3...s1-2	73	86	80	80	custr2....cuccest5	cucc3...cucc2...cc1 ..			
					Force of wind	as 2.41 is to 10.					Amount of	clouds as 4.58 is to 10			

Max. range 30.17; min. 29.'91. 30.06,25 mean for Aug 83°09 mean for the month. Max. range 97°; min. 73°.

GENERAL REMARKS.—2d wind high. 5th, 7 A. M. heavy thunder shower to the SE. 10th, 10 A. M. thermometer in sun 110°; small meteor in evening. 11th, 10 A. M. thermometer in sun 113°; three fine meteors 9–10 P. M. 12th, 9–10 three fine meteors with trains of light, also small ones. 16th, 7 A. M. heavy thunder shower to south, very distant. 17th, 5 P. M. thunder shower to S and SW and N; 6 P. M. thunder-shower to NE and W. 18th, hazy all day near horizon. 20th, 9–10 P. M. several small meteors. 21st, new moon 9.08 A. M. 25th, wind high last night. 26th, about 4 A. M. E. wind.

METEOROLOGICAL TABLE FOR SEPTEMBER, 1865, AT GALVESTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SNU RISE	1-3 MP	SUN SET	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &c. A. M.	RAINS, FOGS, &c. P. M.	RAINS, FOGS, &c. NIGHT.
Fri...	1	02..06..	02.97.94	30.00	0.....N1-2....	E1-3...E1-3...E1-3	78	88	81	82	cuccs3.....cu4......	cuccs3.cccus5.cccis6	....	....	....
Sat...	2	90....95	92868886	29.90	0.. .W1-2....	NE2-4..E1-3...E1-3	78	90	82	83	cccu3.....cucc5.....	cucc3...cc3...ccstr3	....	....	....
	3	86..94..	94..88..	29.90	SE0-1..SE1-2..	SE2-4.....s2-4.....	80	89	81	83	custr3. ...cucc4....	cucc4.....cucc4.....	spr	....	....
Mon..	4	98..04..	99.98.95	30.00	SE1-2..E1-3...	E2-4 NE2-4 E2-4E1-3	80	90	83	84	cucc3.....cucc3.....	cucc4..cucc4..cucc3	....	...shr to SE	....
Tues.	5	96..98..	97.90.92	29.94	NE1-3..N2-4...	N2-4..NE2-4..NE1-2	81	92	84	86	cccu7.....cucc6.....	cccu4 .cucc3..cust3	spr..spr ...	....	....
Wed..	6	87..90..	86.80.79	29.85	N1-3..W1-3....	N1-3..N1-3...SE1-2	77	91	84	84	cc8 .....cccuci6.....	cucicc6..ccciCu.cicc4	spr.........	....	....
Thurs	7	86....91	89.86.85	29.88	s1-2....s1-3...	s2-4... s2 4... s1-3	80	89	84	84	ccci3.... cccuci6....	cucc3 cucc8..cuccci4	....	....	....
Fri...	8	92..96..	97.95.94	29.94	s1-3...s2-4....	s2-3... s2-4... s1-3	82	89	85	85	cucicc3...cccuci3...	cucc6..cccu4 cucc7	....	....	....
Sat...	9	98..05..	06.03.02	30.02	s2-4... s2-4 ...	SE2-4..SE1-3..SE1-3	82	87	84	84	cccuci6....cccu6....	cucc7..cccu5..cucc4	.......R0.01	....	R...........
	10	07..09..	10.07.06	30.08	SE1-3..SE1-3 ..	E1-3...E2-4...E1-3	82	85	82	83	cccustr7...cccist4...	cucc9..cucc6..cucc4	....	ths0.24..shr	....
Mon..	11	04..09..	07.02.96	30.03	0.....E1-2.....	E1-3...E1-3...E1-2	79	87	82	83	cicucc7...cccuci8...	cccu8.cicucc6 ciccst5	......R 0.01	....	lightn'g to E
Tues.	12	93..98..	95.90.88	29.93	0....-N1-2	NE1-3..NE1-3..E1-3	78	87	82	82	ciccstr4. .cccist6...	cucist6.cicucc5.cicc5	thSE..R0.01	....	....
Wed..	13	88..91..	88838182	29.86	N1-3...N2-4...	N2-5..N2-5. NW2-4	76	83	78	79	ciccustr8..ccstr9....	ccdcist9 ccn10 ccstr9	....	R 0.13.... R	spr.........
Thurs	14	97.07.08	..060706	30.02	s1-2... s1-3 ...	s1-3... s2-4... s1-3	76	87	82	82	cuccsci5..ccust6	cccusccscicu cicccus	spr..RtoSE	....	.......R 0.01
Fri...	15	12..16..	16.13.12	30.14	E1-2.. E1-3...	s2-4...s1-2...E1-0	79	83	80	80	cucc3....cuccstr6...	cucc8cuccs9.cccu10	... shr to S	R 0.12......	....
Sat...	16	12.16.16	..10..08	30.12	E1-2....E1-3...	NE1-3..NE1-3..E1-3	79	90	81	83	ccci5.....cucc6.....	cucc5. cccuci6.ccci7	shrs to S&E	....	....
	17	11.16.16	..08..10	30.12	E1-2... E1-2...	E1-3...E1-3...E1-2	79	89	82	83	cc3...... ccci5......	ccstr4..cicu3..cicu3	....	....	....
Mon..	18	10..15..	07060999	30.07	0....NW1-2....	NW1-2NE2-6N4-61-0	75	92	78	82	cccistr4.....cc9.....	cucc2..cu8.. nccstr9	....	....ths.....	....
Tues.	19	04..07..	04.02.00	30.04	N2-4...N1-3...	N1-3....NE1-2....0	73	87	79	80	cc2.......cc2.......	cc2.....cc2... .ccs2	....	....	....
Wed.,	20	03..08..	05.04.03	30.05	N1-3...N1-3...	NE1-3. NE1-3..E1-3	72	87	79	79	cuccstr4... cccu8....	cuccst4cccustr3ccst3	....	....	.......spr.R
Thurs	21	05..08..	06.04.01	30.04	NE1-2..N1-2...	N2-4..NE2-4..NE1-3	74	83	79	79	cucc8.....cucc9.....	cucc6...cc8...cccu8	th 1.50R0 02	....	.......R 0.20
Fri...	22	00..04..	99.98.67	30.01	E1-2.N2-4.N1-2	NE1-2..NE1-3..E1-2	75	81	79	78	ncu10.....ncc10....	cccu8.cccuci8.cucc8	ths 2.22.....	....	....
Sat...	23	98..02..	98.95.95	29.98	N1-2...N1-3...	E1-3. ...E1-2 0	75	84	79	79	cccucistr4.. cccustr8	cccicu5cicu3.cuccst2	ths to S ...	....	th to N......
	24	97..03..	97.95.94	29.99	N1-2...N1-2...	N1-2...N1-2...N1-2	75	83	80	79	cc3.......cc9.......	cccu8 .ccs3...cccu4	....	....	............R
Mon..	25	96999899	96979394	29.96	E1-2.N1-2.W1-3	N3-5...E1-2...E1-3	77	71	77	75	cccu6.....ccn10.....	n10.....n10....ncc9	R0.02. ths—	———0.25...	....
Tues.	26	95..00..	97.94.94	29.97	N1-2...N2-4..	NE1-3.. E1-3.. E1-3	75	80	78	78	cc9.......cc8.......	cccu9..cccu9..cccu9	..shr 0.20...	RtoSWshrS	spr.........
Wed..	27	95.02.02	..97..98	29.98	E1-3... E2-4...	NE2-4..NE2-5..E2-4	75	83	79	79	cc8.......cc8.......	cccu8... cccu8...cc8	....	spr..spr....	shrs 1.19 ....
Thurs	28	04..06..	06.03.03	30.05	E1-3...E1-3...	NE2-4..NE1-3..E1-2	75	83	79	79	ccn9......ccn8......	cccu8..cccu7.. ccst4	shr0.08.....	spr.........	.. shr ....
Fri...	29	06..12..	10070607	30.09	NE1-3..N2-4...	N1-3..NE1-3..NE1-2	76	86	79	80	cccu8.....cccu8.....	cccus6.cuccs4.cccu3	.....shr0.04	....	....
Sat...	30	10..15.	12070607	30.1[illegible]	N1-2..NE1-3...	NE1-3..NE1-3..E1-0	75	89	79	81	co2.......cc3.......	cucc3..cucc2..cccu3	....	....	.. shr ....
					Force of wind	as 2.83 is to 10.					Amount of clouds	as 5.63 is to 10.			

Max. range 30.'16; min. 29.'79. 30.'00.20 mean bar.; max temp. 93°; min. 71. 81°26 mean for month. 21 days with rain.

General Remarks.—4th—5½ p.m rainbow. 5th—about 10 a.m. showers to N & E. 6th—10 p.m. bar. at 86. 7th—S wind fresh all night. 8th—S wind 2-5 all night. 9th—SE wind 2-5 all night. 12th—10-11 a m. ths to E. 13th—N wind 2-4 all night. 18th—3-4 p. m. ther. fell to 74°. 19th—new moon 9.52 p. m. 21—7 a.m. rainbow. 23e—9-10 p.m. small meteors falling. 26th—E wind 2-5 all night.

METEOROLOGICAL TABLE FOR JANUARY, 1866, AT GALVESTON.

TIME.		BAROMETER A. M.	BAROMETER P.M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE	1-3P M	SUN SET	MEAN THSR.	CLOUDS. A.M.	CLOUDS. P. M.	RAIN, FOGS, &C. A.M.	RAIN, FOGS, &C. P.M.	RAIN, FOGS, &C. NIGHT.
Mon.	1	30.30	12...2...25	27.00	NNE6	NW..E7	57	56	..	..					
Tues.	2	30.41	30.40.30.40	30.40	NNE4	N1	42	55	51	49	0	.01....ci6	0	0	0
Wed.	3	30.50	30.59.30.40	30.55	NE½	NNW6	45	57	49	50	ci	.01-3....05-6	0	.01-3.	0
Thurs	4	30.70	30.73.30.15	30.72	N4	NE1-2.NWW½1-2	43	54	52	49	0	.01-3	0	.01-3.	
Fri...	5	30.77	30.77.30.76	30.76	E2	1-3E1..NE1	44	56	52	50					
Sat...	6	30.60	30.60.30.54	30.56	E3.	1-3E2..E6.6-7	52	58	55	55	str	101-3..str9-7	foggy	mist	
	7	30.52	30.50.30.55	30.54	E2	E2..SSE2	38	62	62	59	cu..str	str....str			mist
Mon.	8	30.64	30.68.30.68	30.66	E1	SE1.1-3..E2	59	60	59	59					
Tues.	9	30.71	30.72.30.70	30.71	E2	E4....E5	56	59	57	57					
Wed.	10	30.58	30.50.30.45	30.47	E4	E4....E4	57	62	60	59		10			
Thurs	11	30.29	30.20.30.15	30.22	SSE3	S2	60	64	62	62					
Fri..	12	30.17	30.19.30.18	30.17	SSW2	W1 ...SW1	65	68	64	62	str				
Sat...	13	30.20	30.23.30.20	30.22	S1	S..E SE	61	68	66	65			foggy	foggy	
	14	30.20	30.17.30.17	30.18	SE	SE2...SE2	63	69	66	66		ci	fc		
Mon.	15	30.13	30.19.30.16	30.16	SSW2	NEnorther	64	73	..	68	ci..str		mist	.00	
Tues.	16	30.17	30.42	30.17	NE3	NE1	50	58	..	54	ci				
Wed..	17	30.36	30.31	30.34	E	E½	54	66	..	60					
Thurs	18	30.17	30.14	30.15	S	SSW2	64	68	..	61	mist				
Fri..	19	30.11	30.14.30.13	30.12	S3	SE...S2	65	69	66	66	ci				
Sat...	20	30.44	30.55	30.50	NE	NE5	52	52	..	52	str	str			
	21	.....	30.58.30.58	30.58	SE	E2....SE1	..	51	49	50		0..........0			
Mon.	22	30.42	30.56	30.39	ESE1	ESE 2to4	53	62	..	57	str	ci..sth			
Tues.	23	31.20	30.19.30.14	30.17	S2	S3....E3	62	65	64	64	cu	cu... 10			mist
Wed..	24	30.14	30.29.30.29	30.21	N7	N4....NW3	49	56	57	54	str	ci	½in		
Thurs	25	30.34	30.36.30.27	30.35	calm	calm	48	62	55	55	0	str	0		
Fri...	26	30.22	30.16	30.20	S1	SSW2	56	67	..	61					
Sat...	27	30.24	30.27.30.25	30.26	NW3	NE....NE	52	63	62	59					
	28	30.30	30.24.30.33	30.26	NE	E.....S	51	55	53	55					
Mon.	29	30.30	30.39	30.39	S1	S	55	68	..	62	fog	0			
Tues.	30	30.30	30.36.30.32	30.33	S1	SE....SE	60	70	66	65	ci	ci			
Wed-.	31	30.32	30.35.30.30	30.32	SE	E2....E2	60	63	62	62	cu....str	10....cu.			

30.'36.73 mean for month.

GENERAL REMARKS.—1st—Rained very hard at night, perhaps 3 inches or more. 2d—fine clear day. 3d—fair chilly day. 4th—thermometer ranged from 48° to 56 all a.m. 6th—East wind all day. 7th—disagreeable day. 13th—disagreeable day. 25th—clear calm day. 28th—clear day.

METEOROLOGICAL TABLE FOR FEBRUARY, 1866, AT GALVESTON.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SUN RISE.	1-3P M	SUN SET.	MEAN THER.	CLOUDS.		RAINS, FOGS, &C.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P. M.	A. M.	P. M.	NIGHT.
Thurs	1	30..24..	30273022	302433	W½	NW1-2..SE2	61	66	63	63	cu	ci....cu			
Fri...	2	30..18..	30143016	30 16	W2	W3..W2	63	68	67	64		custr....cu			
Sat...	3	30..32..	30353035	30.34	E6	NE4..E4	58	67	68	60	10	10....cu			
	4	30..30..	30.33...	30.30	N7	NE7	52	53	..	52	cu	cu....R			R— — — —
Mon .	5	30..34..	30.32...	30.33	N8	NE7	42	44	..	42	10	10		R— — — —	
Tues.	6	30..48..	30453040	304433	NE6	NE5..NE4	42	43	47	43	n	10			
Wed..	7	30..37..	30403039	305720	NE2	NE..ENE2	42	53	49	41	10	10	fogs		
Thurs	8	....40..	..42..35	39...	E1	NNE1..SSW1	47	56	56	53		ci....custr	fogs		
Fri ..	9	....25..	..24....	26.05	SE1	S1	55	62	..	61			fogs		
Sat ..	10	30..00..	29982990	26.94	WS3	S4..S4	62	62	60	62	str0		fog	spr	spr
	11	29..95..	30053007	30.00	NNW2	N4..N6	64	61	63	63	10	cu....str	fog		
Mon .	12	30..20..	30.25...	30.22	N4	E2	55	67	..	61	10	10			
Tues.	13	30..29..	30303018	30.12	N4to5	E4-5..E3-5	58	60	60	59	str	cu....cu			
Wed .	14	30..23..	30.39...	30.16	NE1-2	N7-10	62	52	..	57	str	cu	foggy		
Thurs	15	30..65..	30653070	30.65	NNE7-8	NE5-6..NNE4-7	30	43	40	36	cicu	cu3-4....str			
Fri...	16	30. 68..	30593065	30.53	N7-8	E4to5..E6-7	37	42	44	41	str	cistr....str			
Sat...	17	30..38..	30293020	30.24	ESE4-5	ESE4-5..SSE4	56	59	60	58	n	10....10	spr	spr	R— — — —
	18	30..30 .	30133016	30.14	NW1-3	N4-5..N5-6	58	53	52	52	ncc	ncc ...ncc	spr	spr	
Mon .	19	30..32..	30363038	30.33	NE1-2	NE2..S1	46	56	54	53	ci	ci....ci			
Tues.	20	30..39..	30433043	30.32	E2-3	E2-3..E2	53	62	58	60	sci	sci....sci			
Wed .	21	30..43..	30433040	304102	E2-3	E4-5..E4-5	55	62	60	57	ci	ci....ci			
Thurs	22	30..30..	30233023	30.25	SSE3-4	S2-3..SE2	61	64	63	61	cicu	n....n			fog
Fri ..	23	30..23..	30233017	30.20	S1-2	E3..E3-4	62	69	65	63	n	ncc....ncc	fog		
Sat...	24	30..38..		30.19	N6-8		48	..	..	47	ccci				
	25	30..71..		302302	E2-3	E5	50	58	..	29	ccci				
Mon .	26	30..72..	30723074	30.71	E1-2	E1-2..E2	53	62	60	58					
Tues.	27	30..68..	30.69...	30.68	ESE3-4	SE3-4	58	64	..	62					
Wed..	28	30..48..	30483042	30.44	ESE2-3	SSE3..S2-3	59	68	63	60	cu	str....cistr			

30.23.13 mean for the month. 57°85 ther. mean for the month.

General Remarks.—17th—disagreeable day. 24th—peach trees in bloom.

METEOROLOGICAL TABLE FOR MARCH, 1866, AT GALVESTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M	SUN. RISE	1-3P M	SUN. SET	MEAN THER	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Thurs.	1	30.23	30.33.30.32	303466	S2	S2....S2-3	61	68	64	6433	cistr				
Friday	2	30.32	30.36.30.35	303433	S2 3	SE3....SE2	62	70	67	6638	cistr	cicucistr			
Sat.	3	30.35	30.40	3037.5	SE2	ESE4	63	66	..	64.5		cuci	fog		
	4	30.40	30.40	30.40	S3-4	E1-2	64	67	..	65.5	n	n	fog		
Mon	5	30.40	30.40.30.40	30.40	E4-5	E2-3....E3	60	62	62	6133	ccn	str			
Tues	6	30.40	30.41.30.40	30.40	E2-3	E3....E4	62	68	65	65	cistr	cistr..ci			
Wed	7	30.40	30.41	30.41	E1-2	ESE2	64	..	68	66	n				
Thurs.	8	30.50	30.50	30.50	N4-5	SE	62	..	61	61	cis	cistr	spr.		
Friday	9	30.49	30.42	30.43	NE2	NE	61	..	62	61					
Sat.	10	30.33	30.27	30.30	SE2	SSE2-3	65	70	..	62	ccs	cc	fog		
	11	30.18	30.10	30.14	SSE4	SE3-4	66	..	68	67	n	nci	rain		
Mon	12	30.08	30.10.30.10	30.09	SE3-4	SE4....SE3	67	70	70	69	cuci	nc....n			
Tues	13	30.10	30.14.30.10	30.11	SE3-4	S3-4 ... S7	69	70	69	69	cicu	n...nstr		spr	
Thurs.	14	30.15	30.23.30.18	30.18	N4-5	N3-4...N3-4	60	63	64	62	n	nstr....n			spr.
Friday	15	30.23	30.27.30.30	30.27	N2	N3....N3	60	62	64	62	ncc	ccs....cc			
Sat	16	30.40	30.44.30.49	30.43	N4-6	N3-4....N1	54	60	62	59	cistr	ccs....cstr			
	17	30.50	30.55	30.52	N4-6	E4	54	62	..	58	ccs	ccstr			
Mon	18	30.43	30.50	30.36	S3		64	..	67	65	ccn	cistr	fog heavy		
Tues	19	30.23	30.20	30.21	SSE4-5	SE3-4	68	70	..	69	ncc	ncc			
Wed	20	20.08	30.08	30.08	S3	SW3	68	73	..	71	nc	n	fog.		
Thurs.	21	30.07	30.15.30.20	30.14	W0-1	S2..ESE3	70	76	74	73	n	ccstr			
Friday	22	30.20	30.14	30.19	ESE3-4	E3	68	70	..	69	cistr.	n		fog	
Sat.	23	30.15	30.19.30.18	30.21	W1	S1....SW2-3	70	76	72	73	ncc	cistr	thunder		
	24	30.20	30.23	30.21	E4-5	S3-4	68	71	..	69	ci	ncc			
Mon	25	30.25	30.20.30.15	30.20	S1-2	SSE3..SSE2	66	72	70	69	cistr	str.........ccstr			
Tues	26	33.05	30.10.30.08	30.07	NE2	NE2...SE1	70	70	68	69	custr	ccstr.........nstr			
Wed	27	30.10	30.15	30.12	E3	E4	67	68	..	67½	n	n			
Thurs.	28	30.18	30.24	30.21	E2-3	E2	69	73	..	71	ccstr	ncc.			
Friday	29	30.30	30.35.30.33	30.31	NNE3-4	NE	67	67	68	67½	cc..str	nci			
Sat.	30	30.30		30.30	SE1-2	S3-4	68	..	..	68					
	31				SSW3		..	..	..		cci				

Monthly mean for bar.30.27.13. Mean ther. 63°87.

General Remarks.—Thunder and lightning on night of 26th.

THE

Galveston Medical Journal.

VOL. II. SEPTEMBER, 1867. No. 9.

We insert the notes of Dr. Labadie on Yellow Fever, believing that the doctor's great success in curing black vomit is worthy a perpetuation, and deserves a monument to his name. No one is more missed than this kind and estimable man. The doctor prepared these notes at my request, and noted them down with great care. He has not given the formulae for his Chlorine mixture, which is to be found in Watson's practice in Scarlet Fever, and Flint's practice in yellow fever, which we insert in notes to this article:

Cases of Yellow Fever Treated by N. D. Labadie.

IN THE EPIDEMIC OF 1864.

GALVESTON, 1864.

Sept. 4th, 8 o'clock P. M., I was called to see a sick soldier of the 2d militia regiment. What he had vomited during the day was kept for my inspection. The contents would have measured about 8 or 10 oz. The strong acid smell it emitted, with the sediments appearing black, lead me at once to suppose it to be black vomit in its first stage. The mahogany appearance of the face, the heavy breathing, the pulse, with the peculiar warmth of the skin, convinced me at once that it was yellow fever with black vomit. Sept. 5th, I was called to take charge of the case.

Col. A. Smith urged me to treat the case. My first attention was to arrest the bleeding of the stomach, and to check further ejections. I gave him Creosote 10 drops to the oz. of water, dose teaspoonful every every two hours; I also gave him a teaspoonful of Chlorine solution every two hours. This solution is made of Chloras Potassæ, Muriatic Acid and water. The Chlorine mixture and Creosote solution, have been my main dependence in every case that I have treated, not omitting cold water to the head and sponging the limbs, when hot and dry during the first stage of the fever. Where pain in the head and fever commences, I require a mustard foot bath, and two or three tablespoonfuls of of Castor Oil, to produce four or six passages from the bowels, and Orange leaf tea to produce free perspiration. I use the Chlorine mixture as long as the tongue remains white or coated; and when I suspect black vomit, I give the Creosote every two, three, or four hours, in water or mucilage; if refused, I substitute in its place, in small doses, Subacetate Plumbi, with minute doses of Dovers' Powders. I never use Opium in cases of yellow fever, it seems to be too prostrating. After the fever is broke, or the first stage has passed away, I recommend as food, essence of beef, beef tea, though I prefer English porter. I avoid using brandy or other liquors, as they are too stimulating, and apt to excite the capillary vessels of the stomach to hæmorhage. With the Chlorine mixture, I break the fever in twenty-four or seventy-two hours. Continue the medicines six or eight days, as the patient generally recovers in about that time. I find a powerful adjuvant in the application externally by friction of mustard and vinegar; but if I suspect black vomit, I prefer soap and water, alcohol, &c. No one who has been sick will deny the soothing effects experienced by frictions; they will often times ask it by day and by night.

If the tongue is coated, I use Calomel, or when there is much restlessness. I find it, in small doses, repeated, an excellent remedy. The bowels, after purging with Castor Oil, Rhubarb, or Calomel, I leave unmolested except the tongue indicate the necessity of more purgative medicines. In all cases of restlessness, constantly changing their position, &c., I apprehend black vomit, and at once I use the Creosote mixture until the case is perfect.

I never allow more than two blankets when thermometer is 80 to 90°; under 80° it matters not so much. Fatal cases have, and do often occur, by physicians neglecting to see about coverings over the poor sufferer. I have witnessed cases so much exhausted under the process of sweating, as to count the strokes of the heart to 140 in a minute, the breathing to 30. When, after removing the covering gradually, have reduced the pulse to 110 and the breathing to a little over 24, I have witnessed cases of spasms and death, by no other cause than the above.

From Sept. 5th to the present, I treated about 200 cases of yellow fever, but as some 15 cases were treated in Wilkes Battery, not entered in my note book, I will only state those I entered, which number 180, of which 19 were black vomit—10 died, and nine recovered.

Case First.—Private A. Anderson. The Creosote and Chlorine mixture was regularly given every two hours; friction with mustard and vinegar every three hours; Sinapism applied over the epigastrum until the effect was perceptible by its reddening the parts, as often as pain was felt. Essence of beef was freely given—coffee, tea, &c. The vomiting was checked; he rallied slowly, as all black vomit cases do. I discharged him Sept. 10, after sixty-three days treatment—no relapse.

Case Second—Private — Hawkins was brought in the same house to be treated by me; he had been sick some four days. Countenance yellow; adnata of the eyes very yellow. The Chlorine mixture was at once given every two hours. Finding him greatly prostrated, I gave him 10 grs. Calomel in two doses, and some Oil to operate. Suffering for want of suitable food, until I could get what was suitable to his condition, I put him on small doses of Tinct. Cinchona and Serpentaria; he soon rallied and was discharged.

Case Third—Anderson, brother of Albert. Although mustard baths were given, tea to make him perspire, and oil to open his bowels, all had but little effect. When I saw him he was in a slight state of perspiration, countenance flushed and mahogany color, eyes unable to bear light, and much ejected with blood, pulse bounding 115. I dreaded this case at first sight. I put him on the Chlorine and Creosote mixture at once, and ordered his body to be sponged with vinegar every three hours. The fever continued without intermission; he soon refused all medicines; would not have mustard; tossed from side to side; could not bear covering. The third day vomited black, and had several black inky stools. I relinquished all hopes of his recovery; he died the sixth or seventh day.

Case Fourth.—Mrs. George Plett, eight years in this place, lived two and a half miles out of town, a short distance from a slaughter pen. She was the mother of four children. She is about 36 years old, strongly built—a woman who generally enjoyed good health—had not been to town for six or eight months—has a child to the breast. Sent for me Sept. 12th. I found her with high fever, tongue dry. She said she had had a chill. I ordered neutral mixture—Sub. Mur., Hyd. Pulv. Rhei. Ipecac. I ordered the Chlorine mixture as early next morning as it could be had, though I did not fully suspect yellow fever at that distance from town so soon. On my second visit, Sept. 13th, I found all the symptoms of yellow fever to be unmistakable. Friction was at once put in requisition—mustard to the epigastrium, &c. Her breathing was heavy; she was very much prostrated; vomited dark sediment, the harbinger of black vomit; Creosote mixture was given her, which she refused during the day; her stools were inky. Thinking the case would be fatal, I urged the strict observance of my instructions during my absence. Sept. 14th.—I was not by her bed side over half an hour when she emited eight or ten ounces of pure blood; nearly 16 oz. she emitted from the mouth whilst by her. I left her as a hopeless case. She died the next day. This lady had not been in town, and no visitors had been there. The men at the slaughter pen were all in the best of health. Was it the effluvia arising from the slaughter house that brought her death? The smell about the pen was anything but pleasant; a pool of blood, two feet wide by 30 or 40 feet long, was daily exposed to the rays of the sun of 88 °; daily, the blood of about seventeen beeves was added to this pool. Eight or ten men were daily at work in that slaughter house, yet none were taken sick.

Case Fifth.—A. Wimmer. I found him with a pulse 120, great headache, and in a fine state of perspiration. After his foot bath and bowels had been well discharged, I ordered the Chlorine mixture, some Spirits Minderei, ad libitum. Up to the third day all appeared to be doing well, yet the hazes of the countenance were too marbled like, tending to light mahogany, no disposition to rally. Suspecting hæmorhage of the stomach, or bowels, I ordered the Creosote mixture to be given every two hours, in water, with the Chlorine mixture, by day and by night. My instructions were faithfully complied with. Friction over the body and limbs every three hours with vinegar. Food, such as he might choose as often as wanted. On the seventh day his discharges were thick and black as tar—first passage small, then larger, &c. He became very faint, with great restlessness; no change in the treatment. Some pale ale was had, of which he took one small dose. With perseverance in the treatment, frictions often repeated, good nursing, &c., he rallied, and his mind became rational, his nerves more composed and quiet, and was restored, after six or eight ounces of blood had passed from the bowels. This is one of the many cases that must have been fatal only for good nursing. For a day or two I was under great apprehension that the Chlorine and Creosote mixture would fail, but perseverance fully sustained me.

Case Sixth—Daughter of Mrs. Rosh, aged perhaps six or seven years. Had been sick two days, and laid near the City Hospital, and had not been in town; her mother thinking that it was worms that caused her sickness, and did not suppose her case dangerous. At first sight I considered it a bad case, owing to the mahogany appearance of the countenance. She had taken Castor Oil, which had already operated, &c. I ordered the Chlorine mixture—one teaspoonful to be given every two hours. Next day I found her very restless, and greatly prostrated, with frequent gagging. Mustard applied to the stomach, and Creosote mixture was at once put in requisition; her body and limbs were sponged with vinegar every three hours, occasionally substituted by warm water, or spirits. Re-application of the mustard to the epigastrium when pain was felt, and when she became delirious I applied Sinapism to the nape of the neck. For seventy-two hours her case was a very critical one; yet the Chlorine and Creosote was faithfully given, with small doses of Calomel to keep her bowels open, as the tongue indicated its presents. She had three or four sinking spells, which was counteracted by frictions. She vomited black sediments upon her pillow and clothes three or four times; also two or three black ejections. The Chlorine mixture was discontinued, but the Creosote was steadily given. She rallied, her appetite increased and fully recovered. As I stated before, this case was near the City Hospital, the child had not been in town, nothing had been received in the house except beef; so the poison, by the 18th of Sept., reached that portion of the city; and by the 13th, five days previous, it had fatally attacked Mrs. George Plett, two and a half miles west, showing clearly that it had spread over three miles within thirteen days. Neither case had been to town, nor in contact with any one infected with fever. Each enjoyed good health up to the day of attack; each had black vomit in nearly equal grade.

Case Seventh—Daughter of Mrs. Mayer, aged six years; lives on Market street; was found with the unusual type of the fever, with frequent emises. The Chlorine and Creosote mixture was given and mustard applied to her stomach frequently. She soon refused all food, vomited coffee grounds on her pillow, her stools were inky, and she finally refused medicines, but could take a little water. She became very faint and weak, refusing everything except water. I ordered it to be given alone, and left her to nature, with instructions to allow food if she called for it. Her vomiting and purging soon ceased, and in the course of one or two days she rallied and got well.

Case Eighth—Henry Norris, son of Capt. Norris, aged fourteen years; lives two miles out of town. I found him with some headache and pulse 126; had a foot-bath, and had taken Castor Oil, which he vomited. I gave him 10 grs. Calomel, the Chlorine every two hours, and, as he complained of pain in the chest, I ordered mustard to be applied, which gave relief. Thirty-six hours after his first complaints he vomited copiously black vomit, and in twelve hours more he was a corpse. Thus in 48 hours his illness ended in death; his dejections were inky black; the Chlorine mixture and Creosote were given and taken readily. In his dejections I perceived black lumps the size of a grain of wheat, which I selected and placed on paper; it appeared to be carbonized blood, hard and dry; when crushed on paper with a knife it did not stain the paper, nor did it wet it, but disappeared into a fine hairset work or lace. As it was held up to the sight, the fibrin of the blood held to each other like fine lace. Several of these lumps I crushed, and all showed the same appearance and texture. I was unable to tell whether this carbonized blood was produced by the acid in the stomach, or by the Chlorine mixture combined with the Creosote. The disease went on so rapidly, and the hæmorhages so profuse by the nose, stomach and bowels, that he sunk at once and died.

CASE NINTH—Child of Mrs. Almarar. The third day it vomited and purged black and died on the fourth day.

CASE TENTH.—Hypolite Barton, a soldier. His appearance being mahogany, with heavy breathing and great pain in epigastrium. He was put on Creosote mixture; sinapism also applied. The second day of his attack black dejection soon made its appearance, vomited black profusely the third day, and died on the fourth. Nothing could relieve him, although the foot bath was given, and good bedding; he perspired profusely, and passed the first stage in twenty-four hours; pulse came do to 80; yet the seat of pain was in the stomach. Nothing gave relief; he complained of great uneasiness, heavy breathing, pulse sunk, and he died.

CASE ELEVENTH—Son of Mrs. Joseph Blacke. He had vomited the oil which had been given. I ordered 10 grs. Calomel and the Chlorine mixture. His fever soon abated, but he soon became unmanageable. I gave him Creosote mixture, and mustard to epigastrium. The bed was not large enough to keep him, as he had a disposition to roll from side to side. His mother declared he was too sick to take medicine; for twelve hours would give him none. I insisted, and urged the continuation of medicine. He vomited on his pillow, and passed inky colored stools, and soon died.

Case Twelfth—Son of Mrs. Bentley. Pretty much like case No. 11th—died.

Case Thirteenth—Son of Mrs. Meeker. Symptoms similar to cases Nos. 11 and 12, except that he became delirious after vomiting black on his pillow, and bled at the nose and mouth freely. He was so wild, that they sent for me in the night. I poured two gallons of cold water on the little fellows head in the course of half an hour before he became calm. Shortly after taking a short nap he rolled himself toward me, and again water was poured on his head in a small stream for five minutes, when he withdrew his head and went to sleep. From that hour he became conscious. With continued friction and small doses of Sulph. Cinchona he gradually recovered, though he was on two occasions as near death as any one can be. Chlorine and Creosote mixture was used until cured.

Case Fourteenth—Rebecca Norris. Vomited and purged black more or less. Chlorine mixture and Creosote was given every two hours. Good nursing and care was taken of her; mustard frequently applied; frictions with strong vinegar; a stove kept in the room to keep the air as temperate and as near 80° as possible. All had a tendency to save her.

Case Fifteenth—Mrs. Capt. P. Norris, mother of Rebecca, was violently taken. I found her with pulse 125, intense headache, face mottled; foot bath had been applied; oil had been given, also, which had operated. Knowing that black vomit was among the family, as her son had died of it, and her little daughter Rebecca having it, I felt it to be my duty to guard against it as much as possible. The Chlorine mixture was given her the first day; state of perspiration was satisfactory; yet the intense pain in the head and stomach was unabated. It is difficult, and I would say impossible, to relieve all pain. As I have found cupping to produce no lasting relief, I prefer mustard plaster, that can be applied at pleasure, with far better effects than cupping. I urge my patients to bear headache whilst I apply ice, when it can be procured; if not, I use cold water. The pain often passes away as soon as the first stage of fever abates. The Creosote was given her; the smell was distasteful to her; she begged to be relieved, but having nothing better to give her, I insisted on her taking it; she complied during the second day. The third day she became light-headed, swimming of the head, and became very faint at 8 or 9 o'clock P. M. Could refrain no longer, and emitted by the mouth nearly one pint of coffee grounds vomit, offensive to the smell, so much so that a lady that stood by me nearly fainted away and reeled from her. Another mouthful was thrown up and she sank into a profuse perspiration. Her pulse for three days was over 100, but sank to 80. She became conscious of her situation, and called for her husband, who was sick in another room. She soon refused all drinks, and died the next day. Nothing that I could do seemed to have the least tendency to arrest the rapid strides of the disease.

Case Sixteenth—James Norris, son of Mrs. Norris, was taken sick about the same time. During the first four days he held out well, but on the fifth day he began to show symptoms of black vomit. He had been put on the Chlorine and Creosote mixture from the beginning. Frictions had to be applied every two or three hours to relieve the frequent spells of sinking. Mustard to the chest had such a good effect on him that whenever he felt these feelings coming on he would call for the mustard, and would require it removed when relieved. He soon refused the Creosote, but kept the Chlorine mixture well. He vomited several times a thin liquid, sometimes particles of blood. Now and then a few grs. of Calomel was given to settle his stomach. On the evening of the fifth day he vomited copiously, chocolate color, with a few drops of clear red blood. A little Sugar of Lead and Calomel arrested further emisis for twenty-four hours, when he vomited freely chocolate again. Frequent frictions, mustard to the epigastrium, strong vinegar applied to the chest, and a perseverance in the Creosote, which he now took readily, with the Chlorine mixture, adding food as much as he would take, had the happy effect to restore him safely in the course of twelve days.

The recovery of these two children I attribute to the Chlorine, Creosote, Sugar of Lead, with frictions, and the best of nursing; though slow in their recovery, yet they have recovered from a disease which carried away a fine and promising brother, and mother, from perfect health—one in the course of two days, and the other on the fifth day.

Case Seventeenth—A son of Mrs. S. Allen. Had no high pulse, quiet at the beginning. When fever had been subdued, the fourth day, became greatly prostrated; pulse weak, and no appetite. He had been taking the Chlorine and Creosote since the third day. On the fifth day he vomited black, evacuations thin inky color; mustard and vinegar were freely used, and applied to the abdomen; Creosote only was continued. On the seventh day his dejections were yellow, appetite increased, and finally got well.

CASE EIGHTEENTH—Sergt. Kuhfus. Black vomit—had been treated two weeks for chills and fever. He died the fifth day.

CASE NINETEENTH—Corp'l Stow. Black vomit. Died on the sixth day.

Total number of cases of black vomit, 19; 9 recovered and 10 died.

Thus, out of 188 cases, I lost none that I treated, except from the number of black vomit cases; and even from these generally doomed cases I rescued nine out of nineteen. I do not know of a single case that I treated to have what is called a relapse.

As yellow fever is a disease of very great prostration, the convalescent may over exhaust himself, is liable to contract another disease, which soon assumes a controling influence over his nervous system, which too often proves fatal. Hence the frequent cases of congestive fever, that prove more fatal than yellow fever. I have met with no congestive fevers this year, but have had cases of intermittent fever to run into yellow, and again into intermittent. On the 16th of September, Charles Hagerman, who had just returned from Buffalo Bayou with intermittent fever of two weeks standing, sent for me. I found him much debilitated and depressed. He told me that he had had a cold chill every night for two weeks. He was 53 years old and a resident of Galveston for twenty years. A gentle cathartic was given. On Saturday the 17th I found him better; he had a light chill and some fever. I gave him 10 grs. Quinine in four doses, to take during the day. On Sunday a message was sent for me to hurry to his bed side. I found him in bed, and as yellow as a ripe orange; he was so from head to foot; pulse tremulous and very weak; cold clamy sweat. I ordered friction with mustard, sinapism to his arms and legs and chest; warm stimulants were poured into him, and in two hours he became warm and more conscious. The Chlorine mixture was given, and he was treated at one for yellow fever, as I could make nothing less of it. The epidemical fever had taken full sway during Saturday night. At my third visit, on Monday, I found him composed, color less yellow, free from pain, pulse 110, with a slight headache; treatment continued as before. On Thursday, I found him depressed; he refused to take anything; friction with mustard, and sinapism applied to his feet and wrists, soon restored him to more cheering looks. The Chlorine mixture was faithfully given every two hours for about eight days. His appetite soon increased. Some tonic bitters was given him on the sixth day. He was soon able to be out of his bed, which he had not left in five days, when again a regular tertian ague visited him, which was finally broken up by a pill that I have been making and using for thirty years, that never fails to cure in twenty days the tertian ague.

A similar case, as to a long residence, is that of Mrs. S. Allen, who, in 1839, was but a child of some 5 years. She was brought up among us, and generally enjoyed the best of health. She is the mother of three healthy children, and had passed through every epidemic that has occured in this place. In the first part of October she was taken down with yellow fever, and with my usual treatment she recovered in about eight days—rather slowly, but as her little son had just had the black vomit I did not wonder as to her slow recovery. If yellow fever is a fever of acclimation, then no one can be called acclimated without its ordeal. What causes the rise and progress of this disease is a question hard to answer. Some say it is caused by a marsh miasma under an atmospheric pressure of over 90° Fahrenheit. Others contend that it is a peculiar subtle posion that explodes in the air, like an inflamable substance communicates itself to certain points, and those who may happen to inhale or swallow more or less of it come under it influence after a certain number of hours, to as long as twenty-four days, which when exploded in the stomach, or is absorbed by the blood from the lungs, finds its seat of infection in the stomach, which it first inflames to such a degree as to cause those violent pains witnessed; leaving its impress there, it soon leaves to do its work. The system becomes so depressed, so exhausted, that all the muscular force is gone; the walls of the stomach, no longer protected by the muscular fibres, a degree of relaxation follows; the capillary vessels relaxed, soon bleed; this blood mixing with a rank acid of the stomach, or bowels, neutralize each other, hence chocolate colored vomit; but if this blood meets a strong acid it becomes black and perhaps carbonizes at times in small particles, hence black vomit more or less profuse.

Since the first epidemic in 1839, in this place, I have closely watched to ascertain its origin and progress. Every time it has visited us our sister city Houston was also visited from twelve to twenty days after its appearance here. Although communication always existed between the two places, yet it required twelve to twenty days to travel that distance. I believe it has appeared in Houston twice whilst we remained free from its scourge. What caused it is a question that no one has yet fully explained. That it takes its origin among us I believe that all old settlers will agree with me; hence quarantine regulations and laws must always become a dead letter. Our city fathers did once pass a quarantine law, and built a hospital on Mosquite Island, now

Fort Point. By day and by night they had men and drays cleaning yards, alleys, &c.—every blade of grass was pulled up and carried away—never was a town more clean and nice. Whilst we were comforting ourselves in our happiness and certainty in our supposed security, and no steamship to arrive, as they had left for the north to be repaired, and no arrivals from N. Orleans or any other port, a servant, German girl, in the employ of Mr. J. Berlocher, living on the Strand, was taken sick and died with black vomit before any one was aware of her real disease. She being a stranger had not been out of the house for weeks, and only about four months at this place from Germany. About that time many were taken sick; so it went on increasing. The poison had inflamed all strangers and the atmosphere; our quarantine law became a dead letter. It spread out rapidly, destroying about four hundred lives before frost put and end to its effect.

A few years ago it broke out in one house on Tremont street, and before three days had passed two deaths were reported. On the following day seven cases were reported on west side of Tremot street, and it went on as usual doing its work of death. There had been no communications within two weeks previous. The first victims had been living here only a few months, yet it carried many natives to their long home, as well as some 300 unacclimated persons. It is believed that yellow fever cannot be personally communicated; it must be inhaled; it is an atmospheric poison. If so, the strong Gulf winds that visit us at this season seem to be unable to blow it away. If it proceeds from the soil, we have seen the waters from the Gulf rise and wash over a great portion of our town to the Bay; much rain has fallen upon our streets and yards, filling every sink, washing the whole surface of the soil as clean as sand could be washed, yet the disease progressed in its direful work, steadily as if neither winds, thunder and lightning, overflows, or rains, had not visited us at all. If it is attached to the under sills and floors of our houses, (perhaps so, in a shape most unperceptible to the eye,) this matter or animalculæ may be carried from place to place in goods, clothing, packages, &c., and finding a suitable atmospheric pressure may easily multiply and propagate itself in the air; so it may go on increasing, advancing slowly from place to place even contrary to strong currents of wind, and harbor in particular places to increase. In this belief quarantine regulations might be of service. This animalculæ, matter, or subtle poison, once inhaled, may be some days in the stomach or lungs before it takes effect on the system, hence a person may travel many days before he is taken sick; it matters little where he goes, it will do its work sooner or later. I have read of cases of black vomit to occur in Chicago, traced from New Orleans. I have seen cases in St. Louis of twenty-four days travel from New Orleans in 1828; some often to twenty days, after leaving that infected port, to die of black vomit. To see new cases of yellow fever ten and even twenty days after the appearance of a white frost, sustains me in the opinion that it is not possible to know who has inhaled, or who has not inhaled the poison on leaving an infected place; and who can tell when this poison was inhaled. I dare say it will be difficult to contract the disease twenty days after a white frost. Doubtless a frost does destroy this matter, or this subtle poison, yet many times this mysterious and awful disease comes and goes we know not how. The present epidemic appeared first among unacclimated persons on Church street. Nothing unusual was perceptible during the Spring and Summer. The thermometer that I have had in my office for twenty years past did not on any day indicate higher than 88° Fahrenheit.

I have watched it closely, and examined it every day. I know that it did not rise higher. Thermometers, like watches, scarcely two alike, yet I speak from one, because it has been my guide for twenty years past. Many years it has stood from 90 to 100 deg., yet no yellow fever appeared among us. When writers say it requires a heat of 90 deg. and upwards to produce the poison, there must be other conditions in the atmosphere to bring it about or to cause this matter to hatch and multiply. Does it not require a peculiar state and exposure to the atmosphere to cause weevil to breed in a grain of corn or in a barrel of flour. Some years there are more in number than usual.

If it is in the air or atmosphere, has it a centre to hold itself; cannot the strong Gulf winds that we have blow it away? We know it has no influence over it whatever. The present epidemic has passed away from us without a frost, yet we witness no peculiar change in the season from any other.

Every Spring inquiries are made whether or not yellow fever will make its appearance in Galveston. No one can give an answer by any calculation whatever. It has appeared for several years in succession, after hard frosts and winters; it has followed or continued its deathly march after very mild winters, hence we have no possible means to tell what portion of the South will be exempted. It comes without giving warning, and we only know it is among us by several cases being taken down within a week, and by its unmistakable marks on the body after death, and by black vomit. Though two or three sudden deaths may happen in the early part of August or September, yet so great is the desire to deny its presence among all classes that I regret to find a greater disposition to do so among the bulk of physicians; an incredulity, very blameable in itself when we consider the great excitement its announcement spreads in the community.

The people look to their physicians to guide them in the enjoyment of health, and to write likewise—men devoid of selfishness, to point out diseases as they exist, as well as to investigate their nature and malignity. It is a difficult thing to reconcile the various opinions about an epidemic among our physicians; they are generally the last to admit the fact. How is it, and why is so? To me it seems wise to foresee danger and to avoid it. There can be no wrong to point out the danger if any may happen. From the Houston papers it seems that it has not been settled among her physicians that there has been yellow fever there, although about fifty deaths have been reported with the so called bayou fever. When yellow fever exists in this place, or in Houston, turning the corpse yellow, it is nothing less than yellow fever, for it is easy enough to distinguish a case of Icteric from yellow fever. With us, what is known as bayou fever is only an intermittent fever, under the tertian type. If it proves fatal, it does so under other forms, hence it may be absorbed in the grasp of yellow fever or of congestive fever, either one very fatal.

That yellow fever appears under the symptoms of billious intermittent form is too frequent to doubt. All such cases of yellow fever that exist I take as genuine, for in a day or so it becomes too apparent to doubt. At first diagnosis Quinine might suggest itself at first visit, but this valuable medicine I surely do not give if I suspect the case, because I have in the Chlorine solution the very proper antidote of that justly dreaded yellow fever poison. The good it effects in the system is so apparent that every dose given goes to check the effect of the poison, decomposes and destroys it entirely; though the whole tongue may change into one coated yellow, yet it soon assumes a natural appearance, as the fever abates and pulse falls below 90 strokes. At this stage I urge my patients to take food of their own selection. This I do to counteract the great loss of strength that must take place after a fast from two to five days. When the fever is left unchecked and runs its course the patient enters on the second stage, which is always one of the greatest prostration. If this state of exhaustion is left to itself the patient must die.

It is in this second stage that the utmost care must be bestowed by the best of nursing, as to frictions, and frequent applications, if there appears the least disposition to faint. It is this second stage that decides the fate of the patient, hence the great amount of nursing and watching requisite to enable the victim to struggle one or two days longer to victory or defeat, or convalescence. This stage I always look upon as the most important in the treatment. I am glad to say, under the Chlorine treatment, I have found but little trouble to carry my patient to the third convalescent stage. I must, however, say in candor that these cases of black vomit, or treatment with it, have been to me of no small amount of solicitude, watchfulness, and close attention to these unfortunates. I feel myself amply rewarded for my success in this stage. Saving nine out of nineteen real black vomit cases is a just pride to me.

With good nursing, without Quinine and Calomel, I have safely carried cases, and some of them very discouraging, to a happy state of health, as many among us will testify. During the first and second stages I enjoin a quiet horizontal position of body. I only required the head to rise from the pillow to enable the patient to swallow; he can change position from side to side, or roll on his bed if necessary; but I do not allow him to rise, and I find the more quiet and submissive a patient becomes the more hopeful is his case. It seems of little importance how the first stage passes or progresses, as it is often impossible to check the fever; it then runs its course, but then it leaves the impress on the stomach more or less severe, and if no black vomit sets in, either from the thorax or bowels, a recovery is soon effected with proper care with one's self; but if black vomit supervenes the result is generally bad. Many cases, however, become fatal without "black vomit," which might be attributed to want of proper nursing, or to medicine properly taken; that the art and skill of success is in securing the proper aid and skill in the second stage, admits of no doubt to me, from convictions; that the bowels once relieved of their contents, in the first few days, remain unaffected, is very true. Calomel, when bile predominates, plays a very important part. I never vomit in this disease, but always avoid it if I can. In the third stage I administer Quinine or Sulph. Cinchona in small tonic doses, or give some of the simple bitters, such as Tinct. Cinchona, Comp. Surpentary, Genitian and Quassia, as the the case may admit of a very happy effect.

These hasty remarks I write in the hope that in any future epidemic I may be able to see the Chlorine mixture universally adopted by every physician who may have at heart the welfare of his patients, and who is not too much fastened to one mode of proceeding, and to too many odd notions.

The great success I have met with in the use of Chlorine and Creosote, fully sustains the reputation these two medicines should have, and a preference should by all means be given them. In 169 cases free of black vomit, which I have had, I lost none—some of them very troublesome to manage, and these were slow to recover. The timely administration of the Creosote, with the often repeated application of sinapism have, I believe, prevented bleeding, although the nose and gums bled in some cases, yet no black vomit appeared, which I must attribute to the Creosote and mustard.

On the 22d of November a white frost, producing ice, appeared. As a general thing, October always brings a frost over the bay, but does not always do so here.

N. D. LABADIE, M. D.

Chloroform in Yellow Fever.

We insert the following to urge practitioners to investigate the use of Chloroform in Yellow Fever:

141 McDougal St., New York, August 3, 1867.

Greensville Dowell, M. D., Galveston, Texas:

My Dear Doctor:—You are, I judge, in the midst of an epidemic of yellow fever. I have witnessed several such epidemics, viz:

At the Bay of St. Louis	in 1820
At Pensacola	in 1822
At Natchez	in 1823
" "	in 1823
" "	in 1827
" "	in 1829
" "	in 1837
At Memphis	in 1855

Besides having been several times in the midst of the disease in New Orleans.

You perceive I have had some experience, more perhaps than any other man now living. The result of it all is to convince me that the means of prevention and cure are yet to be discovered. You have seen my publications on the power of chloroform by the stomach in the inceptive stage of fever, and I hope you will try it in the dreadful disease now before you. My hope is that in the chill and early stage such doses as will secure a few hours sleep will cause a suspension of the disease to such an extent as to make the subsequent treatment easy, and also that in the congestions which follow, with suspension of secretions, the same treatment will afford great relief. I venture to commend these suggestious to your consideration.

Yours very truly,
A. P. MERRILL.

P. S.—I wish you would try quinine and arsenic as preventives, and particularly the arsenious acid. A. P. M.

Examinations for Life Insurance.

The habit of Life Insurance has grown so greatly in popular favor, that at the present time the great majority of the business portion of large cities invest in it a portion of their yearly incomes. Life Insurance Companies are offering inducements which attract even the wealthier men who obtain insurance upon their lives as an investment. This popular belief in its safety and propriety, has given organization to a great many companies, and large amounts of capital stock are now invested in the business of life insurance.

It is not our purpose to speak of its advantages, or go into any review of the general questions involved in it; every one is sufficiently familiar with its protective advantages to the poor, and the rich would not be likely to invest in it, if any objections were really well founded. It is, however, only upon the physician's certificate, and its importance to the companies making insurance, that we propose any remarks, and our suggestions will be directed to both physicians and insurance companies.

Insurance Companies, base a contract upon the probability of life, in the assured; they propose to take his chances of living to the age of sixty-five, more or less, and if he fails of this standard they lose, if life is prolonged beyond it, they gain. Physicians are appointed to examine into the physical condition, and are expected by companies to do this, with great fidelity and care. It is obvious that everything depends upon the discrimination, intelligence and faithfulness with which this examination is made, and that companies who allow careless or incompetent examinations by their examining physicians, are not wise for themselves or safe for the community. We have a personal prejudice in favor of insurance, and believe it a duty every one, not above its necessity, owes to those dependent upon them for support; but our confidence in its safety and long continuance has been greatly weakened by observing how insufficient and unsatisfactory are the examinations upon which it is based. We have known consumptives recommended at first rate risks, in the later stages of the disease, and we have known cardiac diseases, certain to terminate fatally in a few years, entirely overlooked, to say nothing of the numerous instances of insurance upon the lives of confirmed inebriates, sometimes delirious even, at the time of examination. That these are exceptional, rather than common cases, is certainly to be hoped; they are sufficiently frequent to throw suspicion upon the permanency of insurance companies, and must already have resulted in serious loss, and greatly augmented the amount of premium which would be required if first class risks, only, were taken. Why is this, and what interests have physicians in it?

The usual compensation for physical examination sufficient to base a rational therapeutical conclusion upon, is from five to ten dollars. The usual price paid by insurance companies for an opinion upon which they mainly base their risks, is from two to five dollars, perhaps three is about the average. Companies show a stupidity of management in this respect truly astonishing, and physicians show a corresponding insensibility as to what rightfully belongs to them, and no wonder that the "blind leaders of the blind both fall into the ditch." The manner of appointing physicians to insurance companies, where really so much is involved, shows a lack of common discrimination, and we are daily reminded of its absurdity; it runs thus: Dr. —— having applied for appointment as examining physician to —— Life

Insurance Company, and referred to you as to ability and capacity, we desire to know your opinion of his fitness for such office; will he serve us satisfactorily? Yes, being the shortest and safest word, we invariably write it after the question, and return the document. We have no reason for writing anything else, and should not feel at liberty to use any other word unless we were prepared to sustain the opinion by adequate testimony. *All* who receive such appointments obtain *such* testimonials of character and standing. When the question is, who in your city or county will give us the safest and best opinion? who do you suggest as most capable of doing us this service? the whole subject becomes changed, and insurance companies show they are not gambling with other people's money.

This whole thing may be expressed in few words. Capable physicians, whose opinions are worth anything, should never give them where so much depends upon their decisions, and where there is so great ability to pay, without adequate compensation. It is extremely illiberal as well as shortsighted for insurance companies to offer for this service insufficient compensation, and it is allowing low estimate to be placed upon important service, for physicians to accept it, if it is offered. We advise the profession to make their examinations worth to the companies a respectable compensation, and to accept nothing else. We would also suggest to companies the danger of accepting risks upon the recommendation of any physician who values his time and opinions cheaply. One other subject connected with life insurance and we have done our duty to both parties.

Insurance Companies are in the habit of asking family physicians to certify to certain facts, without any compensation at all. The knowledge a family physician may possess is often of great value in determining the safety of a risk, and they can never obtain it without adequate compensation. Physicians have no inducement to communicate their knowledge of their patients to insurance companies, and the non-committal manner in which the questions are for the most part answered, show, or should show companies, that as the matter now stands, it is the purpose *not* to know anything about it. If our patients have had constitutional diseases, or bad habits, it is greatly for the interest of the family physician to keep his knowledge to himself, and insurance companies are rarely made wiser by his answers to their usual questions. It will be replied, that this statement is given in the interest of the patient, and that the value of it should be paid by the assured. This is not true; it is the *company* who desire the knowledge an attending physician may possess, and they should be expected to pay fairly, to obtain it. As the custom now is, with some companies, they pay a mere pittance for examination by their own physician, depend considerably upon family physician's replies, and really obtain nothing from either, worth a farthing in correctly estimating the physical soundness, or the probable duration of life.—*Buffalo Med. and Surg. Journal.*

Fractured Bones.

SOME HINTS AS TO HOW THE SURGEON SHOULD MANAGE FRACTURED BONES; HOW HE SHOULD MANAGE HIS PATIENT, AND HOW THE SURGEON SHOULD HIMSELF MANAGE.

By C. C. F. Gay.

Mr. President and gentlemen of the Association, unlike other departments of surgery, this opens up a field where the same amount of labor, patience, tact and skill do not, as in the domain of operative surgery, reward the laborer with a corresponding amount of *eclat.* Best efforts are not rewarded by corresponding approbation, but when bringing to his work, skill equal to that brought to bear in the other departments of surgery the surgeon's reward oftentimes consists in the displeasure of his patients and their friends, who, impelled by a species of innate depravity, attempt to appropriate the surgeon's capital, gratis, refusing payment for services on the ground of neglect or unskillfulness, proceed to mulct the attendant in damages, and legal proceedings are known sometimes to have been instigated by officious friends for the purpose of ridding themselves of the payment of an honest debt.

For the faithful cultivation of this field of surgical science, for labors directed toward the protection of the surgeon against suits for mal-practice and for advanced and progressive views upon surgical pathology, we are more indebted to the labors of Dr.

Hamilton than to any other American surgeon, and the members of this Association who were for so many years connected with him in these monthly seances, take pleasure in the acknowledgment of his worth and the recognition of his work as authoritative.

But, gentlemen, disclaiming any personal merits, it is competent to remark, that it was not reserved for one mind, however comprehensive, unaided and alone, during a single life-time, to bring order out of chaos, make the rough and rugged places smooth, or by the touch of his magic wand bring out the gushing and sparkling waters, or in short, to bring to perfection and to an exact science that which is encumbered with so much that is imperfect, crude and shapeless. It may have been reserved for lesser minds to contribute lesser things. If, in addition to the enlightened direction of medical and surgical teachings, the observations and studies of two decades have not taught us anything; if some old views have not been discarded, and new views when they have been tried and proved to be true views, been received, then have the labors of these years been of no service and the profession practiced in vain.

In indicating some hints how the surgeon should manage broken bones, the writer would rely chiefly upon his own experience and observation, growing out of his own and others' practice.

Authority in surgery has so long exercised such powerful influence upon the practitioner as to be detrimental to the best interests of science. It requires boldness and courage to deviate from authority; such departure or deviation is misconstrued into disrespect, or obstinacy, or ignorance; far be it from me to undervalue or underestimate authority in medicine or surgery. I yield to no one in my reverence to it and for it, but if we hope for progress in our art, and are not content that others do our thinking for us, we must sometimes become amenable to the charge of discourtesy and disrespect.

It is independent thought that we most need; a frank and clear presentation of those thoughts and a respectful hearing and reception of them, even though they do not emanate from those who have been regarded as authority. In this way will the combined and united labors of individuals be productive of good fruit.

In the management of fractures it is hardly necessary to say before this enlightened audience, that a full and correct knowledge of the surgical pathology of the reparative process, is an indispensable prerequisite to intelligent management; following this, the more genius and *tact* the surgeon possesses the better it will be both for himself and his patient.

I do not propose to occupy your time in discussing the pathology of the reparative process of broken bone; it is sufficient to say that a very great stride from error towards truth was that step taken by Paget, fifteen or twenty years since, when he stepped out of the beaten track, ignoring the theory long since laid down by Dupuytren, and establishing a theory of his own so much more rational, and not only rational, but a theory proved to be well founded by well attested experimentation and by well grounded observation.

If you would pardon an apparent digression, I would here pause for a moment, to pay a passing tribute to the genius of Hamilton, who, with Paget, is equally entitled to the honor and fame of establishing the new theory of the reparative process, arriving, as he did, at nearly the same conclusions, consummating his labors and publishing the results to the world about the same time.

The labor of these two men, directed in the same channel, toward the same object, giving results to the world almost simultaneously, has been the means of revolutionizing the management of fractures, or if this be too strongly stated to suit the fastidious, I will modify it by stating simply that the treatment of fractures based upon the knowledge imparted to the world by Paget and Hamilton, becomes rational and intelligent.

The surgeon has not to wait for the ninth day provisional callus of Dupuytren to serve as nature's splint, for he knows that when the fragments of bones are properly adjusted, especially when the fracture is near the extremity of long bones that union will occur with no more deformity, when no splints are used, than will occur when they are used; that splints are not so indispensable as formerly supposed, and that they may be *laid aside much earlier* than we have been taught by the highest authority to believe.

When about to treat any special fracture, the first question of course which arises relates to diagnosis; and here, I believe, the most skilful surgeon may blunder, if he should allow himself to be hurried, and should not exercise proper care and attention in his manipulations. But the blunders are exceptional only—none ever need occur; but right here, at the threshold of right management, *tact* is brought into requistion. I have seen patients suffer all the pains and torments of the inquisition, while submitting with commendable fortitude to rough and misdirected manipulations. I quote the language of a well known author, who says:

"It is difficult to state the precise manner in which the surgeon ought to proceed. Much will depend upon the circumstances of the case, something upon one's natural tact, and upon the amount of experience, but more I think upon natural kindness of heart and social education. The man of refinement and sensibility will know instinctively how to proceed, and needs no instruction. They who lack these qualities can never learn, and it would be quite useless to undertake to teach them. I sincerely wish such men as these latter would find some more suitable employment than the practice of a humane art."

With little experience and a good deal of tact, I am confident the majority of fractures may be diagnosed and dressed without inflicting much pain upon the patient, and the work accomplished in little time.

After the proper adjustment of the fractured bones to their normal position, he who possesses most genius for improvising the necessary apparel, then and there upon the spot, making his splints of the rude material at hand, will be found, I apprehend, most competent to adjust his apparatus. The more simple the apparatus the better, and a splint made and adapted to any special fracture is far better than the adaptation of a special fracture to a carved splint made to suit a supposed case.

The most important question now to determine is, the *length of time* the splints should be continued in use. Your time would not be lost if an entire paper, written by some competent person, should be devoted to this single topic. At this point in the discussion I find that the views of the highest authority and the views of the humble writer become divergent. All the care, precaution and tact possible, dwindle into nothingness in comparison with the right decision of the surgeon at this point, in determining the length of time for the use of splints. I do firmly believe that more injury is done by long-continued use of splints—by their use beyond their actual necessity—than by erring in the opposite direction. These views, which I assume to be true views in the management of all fractures, are manifestly true beyond cavil, when made applicable to fractures near joints.

The settlement of the question of the longer or shorter continuation of surgical appliances, in a legal point of view, is important. With this question unsettled, as we must concede it to be, it would prejudice a jury greatly to the detriment of a defendant in court, for the witness to swear that splints were removed in case of any fracture in ten days, or two weeks, while defendant's case could not at all be compromised should medical or other witness testify that splints were used for three or four months; use of splints almost any length of time, however long, is never prejudicial to the case.

It is no new thing for a medical witness to testify that deformity after fracture, is perhaps partially owing to the fact that splints were removed too soon. Who has ever thought to testify that in case of fracture near a joint, causing temporary or permanent anchylosis, that splints were not laid aside soon enough? It seems to be impressed upon the minds of judge, jury and witnesses, that the long-continued use of splints is beneficial, and that early to dispense with their use is detrimental.

In the case of Ostram v. Kempson, cause tried before Hon. I. A. Verplanck, for mal-practice, in March, 1866, a verdict was rendered for $300 damages. This was a supposed case of Colles' fracture occuring in the person of a female, aged 64 years. The injury happened in November or December, 1863; suit brought March, 1866, a little more than two years subsequent to date of injury. On the trial the daughter of Mrs. Ostram testifies that "her mother first got use of her fingers three or four weeks ago; up to that time had no power over them; it was ten months or a year after injury before she was able to bring thumb and finger together, but had no strength; she can now clasp her hand, but can hold no weight," etc.

The defendant, Dr. Kempson, testifies, that "he removed the splints in *six weeks*; there was then a perfect state of arm, except a little deformity." One surgeon testified that, "in patient of Mrs. Ostram's age, arm should be kept in splints from *forty* to *sixty* days."

Now I take not the slightest exception to the merit of the testimony of these physicians, because the views therein expressed are in accordance with established custom, and are supported by authority, but I do take exception to the authority, and decidedly differ therefrom. I incline strongly to the belief that had the splints been removed in two weeks in the place of being used six weeks that Mrs. Ostram's daughter would have been able to testify that her mother was able to use her fingers much earlier, that strength of hand would have returned much sooner, and that the deformity would have been no greater.

But where may the surgeon be found of sufficient boldness and independence to strike hands with authority and testify that in case of Mrs. Ostram, splints should have been removed in two weeks? If such medical witnesses can be found so to testify, he would testify to that which is true—perform an act which would redound to his own credit—perform valuable service for the profession, and do a most humane act for the unfortunate patient.

I do not, gentlemen, speak in this manner of things I do not know, but I do thus speak of things that are true, of what I do know, have seen and believe; authority to the contrary notwithstanding. To enforce these views, were it necessary, examples could be cited, cases given of Colles' fracture, and fracture of the lower extremity of the fibula and internal malleolus—fractures wherein almost invariably the injury to the joint becomes paramount to the fracture, in which cases splints were removed in ten days, with result equal to any treated by longer use of splints, and perhaps far better result. But this paper will be of sufficient length and your patience sufficiently taxed without encumbering it with cases.

In fracture of lower extremity of fibula and internal malleolus, as with the fibula fractured with luxation of tibia, Hamilton says: "As a general rule the dressings ought to be wholly laid aside by the end of the third or fourth week." After this date he regards the use of splints and bandages pernicious.

Conscious as I am of the danger of differing with so high authority, appearing not unlike presumption to attempt it, truth, nevertheless, requires of me to say, if my own experience and observation have taught me anything, they have taught me that splints should be wholly laid aside at the end of ten days, if the patient be either in middle life or approaching old age; and why? The Doctor, I think, clearly states the reason; because of the stiffness of the ankle-joint. This stiffness, he says, in three of his reported cases, remained after one year, and in one case two years, etc. It is this stiffness as well as deformity that the surgeon desires to avoid. When the bones, in this injury, are properly adjusted, they will remain in position with rest at the expiration of eight or ten days without any support from splints or bandages.

One other exception only do I wish at this time to take, to what I regard the highest authority in this country. It has reference to the time when broken bones should be reduced. All will agree that broken bones should be reduced as soon as possible. But when once reduced, do they always remain so? Hamilton says, "when the injury is recent the muscles offer less resistance, their resistance being increased after a time not only by the reaction which ensues upon the shock, but also by actual adhesion between their fibres."

I think this statement amenable to criticism. Observation teaches, I think, that the pain, irritability, and the emotion of fear following immediately upon the receipt of injury, causes *then* greater muscular resistance than at any subsequent period. Therefore, in the management of oblique fractures, remote from joints, equally with fractures near joints, good surgery requires at first loose and temporary dressings, and when swelling, muscular resistance and irritability subside, permanent dressings.

You will note that I have had in mind chiefly those fractures occurring *near joints.* I should be glad to be able to say that I had read Smith upon the topic under immediate discussion, but am sorry to say that I have never availed myself of the benefits to be derived from persusal of his able work, and consequently am entirely unacquainted with him, and know not what his views are.

In the management of fractures remote from joints, I have nothing to say, further than that I do not object to a longer use of splints than in fractures contiguous to joints. Successful management of this branch of the surgeon's art is somewhat intuitive and dependent upon native genius.

If not of the last importance, it certainly is not of the least importance for the surgeon to know how to manage his patient. Little things and "trifles though light as air," in the aggregate, become potent, and applied to the practice of our art, give symmetry and strength to the whole. Medical minds bend reluctantly toward the smaller things that obtrude themselves along the route of research and labor. To neglect these trifles is to commit wrong. Our authors sacrifice the little things to the weightier matters of theory. Hope hath trodden upon the heels of despair and victory wrung from defeat, by the mere observation of the movements of a spider spinning its web. Laws of gravitation became established by witnessing the fall of an apple from its parent stem to earth. Despise, then, not the day of small things.

The surgeon's duties do not end with the broken limb mended, nor begin with the broken fragments adjusted. He should state to his patient frankly in the outset what to expect, and to what submit. His patient should be informed that his broken limb will be shortened, deformed, etc. Should the patient be dissatisfied with the prognosis, then turn him over to the tender mercies of some one who will promise better results. Should your services be accepted upon conditions stated, there will be no excuse in the patient failing to liquidate his obligations to you and no cause for complaint.

Beside the proper management of the broken bones and the right management of the patient, the surgeon has in charge also the management of himself. I have briefly indicated how he should *himself* manage, and it is only reserved to hint how he should conduct himself. Self-control is a virtue. It is good to know one's self, and if this be not enough to know, as the poet claims it is, then seek to be satisfied by knowing how to control thyself. However provocative the acts of patients and friends, which are often beyond endurance, however great the causes, which are numerous and ever present, the surgeon should so control himself that his own self-respect and the dignity of his vocation should not be lowered in tone by the exhibition of any ill temper.

Should there be refusal on your part to dress a limb for an irresponsible person, it may be done with decorum and without any exhibition of ill temper or in the least becoming obnoxious to such charge, especially when no *charge* is to be made. And right at this point I approach a delicate and debatable subject, but one relevant to the surgeon's management of himself, and you may, and doubtless will, dissent from the views of the writer, and perchance hold him obnoxious to the charge of inhumanity. I have learned to believe that the kindest and most humane acts of men are often seized upon by the ungrateful beneficiary, and turned upon the benefactor with relentless hate, and used as a two-edged sword, piercing to the dividing asunder of the joints and the marrow.

A few installments of the subjoined experience will, I think, amply teach the most humane surgeon how to manage himself, and how *himself* to manage under like circumstance.

Once upon a time, not very remote, I had occasion to congratulate myself upon the result of treatment of a Colles' fracture. Patient irresponsible; his employer, a man skilled in the manufacture of car-wheels and rolling stock machinery, becoming responsible for payment in full. Three months after date of injury, on presentation of bill, I was met with the impolite rebuff that if "my work had been well done, the man would have been at his work a long time before and have earned enough to have enabled him to pay his own bill." Thanking this man for the exhibition which he had given me of his ill-breeding and ignorance, I departed from his august presence. This man afterwards attempted to trump up sufficient evidence to convict of malpractice; accordingly he sent his patient to a number of physicians to obtain their professional opinions. But to the honor of the medical profession of Buffalo, be it said, no sympathy or encouragement was extorted from a single member.

It was once my misfortune to be called hard-hearted, because of refusal to dress a broken arm. The employer stepped forward and became surety, took patient to his own house, providing him with meat, drink and bedding. When able to leave, this ungrateful wretch quitted the country for the Queen's dominions, taking with him my splints, and leaving me to liquidate his board and lodging account, which I partially did, by deducting one-half the bill for surgical services rendered.

I therefore appeal to the most humane surgeon—to laymen and to an enlightened community to endorse me, while I briefly indicate how the surgeon should himself manage, when in the legitimate practice of his profession under difficulties of this nature. I think it may be laid down as a rule of action to refuse to dress a broken bone for an irresponsible person unless such person be willing to bind himself in writing never to carry his case into court, or unless some reliable individual will agree then and there to stand between the surgeon and suit for mal-practice. The only exception to this rule is that made in favor of widows and orphans. No man, I apprehend, is willing, voluntarily, to place himself in position to defend himself against suit for mal-practice, when his services, if rendered, are beyond hope of reward. No man is willing to assume such relation with the chances all in his favor of being mulcted in damages, and no surgeon should be forced by popular sentiment to serve the community upon any such unequal terms. But when holding himself up and offering his services to the community as competent to discharge with fidelity and ability the duties of his office, I hold that the surgeon is necessarily forced, if he be not willing, to perform all service to patients when called upon, provided he is unquestionably to receive remuneration for the same.

Thus, gentlemen, have I endeavored in as few words as possible, to put forth views upon the topics discussed, which to me seem to be true views. This paper does not aspire to the dignity of a scientific "dissertation upon a designated subject." The writer has only sought to give expression to views, crude and undigested; such, in a word, as have suggested themselves to his mind during haste in writing them out, to throw out a few practical hints upon a somewhat practical subject, and to group together the neglected trifles, of which nothing is read or said, and as little written. If I could hope that the contents of this hastily written paper would meet your approbation, then should I feel myself abundantly rewarded for the little labor bestowed upon it.

Thanking you, gentlemen, for your kindness in making me the recipient of many courtesies and favors in times past, my obligations are again renewed for the kind and cordial invitation extended to me to prepare a paper for the Association, and for the attention given and interest manifested during its reading.

Resection of the Elbow Joint.

BY J. D. RANKIN, M. D., OF PALESTINE, TEXAS.

Prof. Dowell—*Dear Sir:* About the first of last May I was called to see William, the son of W. R. Payne, of Henderson county, Texas, who was suffering from a compound dislocation of the elbow joint, with fracture of the ends of all of the bones of the joint.

The injury was produced by a fall from a horse, in which the patient, a boy about six years old, fell off, and a sister, who was also on the horse, fell upon the back part of the arm, forcing the joint forward, so as to rupture the capsular ligament of the joint, and to force the heads of all the bones through the fleshy tissues of the arm, so as to appear, with the ends of them out of the wound.

The hand was thrown back upon the shoulder; this, of course, forced the heads of all the bones through the fleshy tissues, so as to bring them to the surface.

The case was treated by three practicing physicians for three weeks. They had used splints and bandages, in connection with cold water dressing, and such constitutional treatment as was indicated. When I saw the case, which was at the end of three weeks, I found the head of the os humerus protruding through the ruptured capsular ligament and the open wound in the tissues of the arm, in a perfectly carious condition, for about one and three quarter inches. I examined the upper ends of the radius and ulna, and found them also fractured and carious, in connection with an immense intumescence of the soft parts of the arm. This was the condition of the parts when I first saw the case. Several persons had condemned the arm for amputation, and others thought that the child could not survive the injury under any circumstances.

Operative Procedure.—Having first produced a fair state of anesthesia, I commenced the operation by turning the fore-arm backwards until the back of the hand was carried near the shoulder. This procedure forced the heads of all the bones out of the wound. I first sawed off one and a half inches of the os humerus; then I used the bone forceps and gouge to clean off the fragments of the radius and ulna, and to remove all carious parts of those bones.

The after treatment consisted in strapping sufficiently to keep the parts in connection, and the water dressing to keep down fever in the parts. The wound healed rapidly from the bottom, and in the course of six weeks the cure was complete, eventuating in a good artificial joint. I had the nurses to commence flexing the arm on the tenth day after the operation, and to continue it from day to day until a good and perfect artificial joint was formed. The boy now uses this hand and arm very near as well as he does the other. I was very much surprised to see how soon the pathological condition gave way after the operation, the osseous and histological formations rapidly returning to a physiological state.

Remarks.—This case shows in a conspicuous manner the importance of discriminating well in all severe injuries before condemning a limb for amputation. It also shows that a good and useful artificial joint may be formed after very extensive injury to important joints. I have been impressed with the belief that resections have been too much overlooked by the profession generally.

[Extracts from Dr. Fenner, on Yellow Fever.]

The Epidemic of 1853 at New Orleans,

CEMETERIES—HOSPITALS—REMARKS.

The interments in all the cemeteries of the city for the week ending at 6 o'clock yesterday morning, Saturday, 27th inst., are in detail as follows:

Interments for the twenty-four hours ending at 6 A. M., on—

			Total.	Yellow Yever.
Sunday,	August	21,	269	230
Monday,	“	22,	283	239
Tuesday,	“	23,	258	220
Wednesday,	“	24,	222	188
Thursday,	“	25,	218	186
Friday,	“	26,	193	151
Saturday,	“	27,	185	151
Total			1,628	1,365

Of the total interments, 90 were cases where the doctor's certificate did not state the cause of death. Of these, at least 77 were yellow fever cases, making the deaths by yellow fever for the week, 1,442.

* * * * * * * * *

The returns for the fourteen weeks ending yesterday at 6 A. M, since the first yellow fever death took place, as follows:

		Total.	Yellow Fever.
Week ending on Saturday,	May 28	140	1
“ “ “	June 4	142	1
“ “ “	June 11	154	4
“ “ “	June 18	147	7
“ “ “	June 25	167	9
“ “ “	July 2	177	25
“ “ “	July 9	188	59
“ “ “	July 16	344	204
“ “ “	July 23	617	429
“ “ “	July 30	723	555
“ “ “	Aug. 6	1134	947
“ “ “	Aug. 13	1494	1262
“ “ “	Aug. 20	1534	1302
“ “ “	Aug. 27	1628	1365
Total,		8589	6170

The cases in which the doctor's certificate did not give the cause of death, were as reported by the Board of Health for the last five weeks, in the preceding table, to the number of 279. Of these, at least six-sevenths were yellow fever cases, giving 239 for that class of disease out of the 279. These, added to 6,170 at the foot of the general table above, show that in the four districts of this city, from May 28 to Aug. 27—or within a day of three months—6,449 human beings have died of yellow fever.

It would be an interesting statistical fact for the Board of Health to inquire into how many children and grown persons, born here, have died of the fever? how many have had the fever twice? how many colored persons have died of it? We know of a number of children born here, under the age of ten years, who have died of the fever; we know positively of one case, and have heard of a good many, where the person attacked had already had the fever here; we know of negroes who have had the fever and died of it; and we know, too, of a number of persons who have lived here through several epidemics, some of whom have been attacked this year, and others have escaped it altogether.

I can testify to the facts specified by the Picayune.

September 1st.—A pleasant day; hard shower early in the morning. The epidemic is declining rapidly; deaths from it now only amounting to about one hundred a day.

September 2d.—This day is appointed by the Mayor of the city as one of fasting and prayer.

Yellow fever is now prevailing at Mobile, Natchez, Vicksburg, Woodville and Thibodauxville. The latter place is a small village situated on Bayou Lafourche, in this State. The following extract is from one of our city papers:

YELLOW FEVER AT THIBODAUXVILLE.—The following endorsement was written on the mail-bill from Thibodaux, September 2, which arrived here yesterday: "Stores closed—town abandoned—151 cases of yellow fever—22 deaths—postmaster absent—clerks all down with the fever. Respectfully, J. C. WHITE, Ed. of Minerva."

YELLOW FEVER IN MOBILE.—The interments in Mobile on the 31st ult., were 27, of which 22 were yellow fever. On the 1st inst. the number reached 32, of which 23 were of yellow fever. On the 2d inst. the interments were 43, of which 37 were from yellow fever.

September 7th.—Only forty-eight deaths from yellow fever to-day.

September 17.—The deaths from yellow-fever have now fallen to twenty-four a day; for the last week, two hundred and twenty one. All the infirmaries of the Howard Association have been closed, excepting one, which is still kept open for convalescents. In fact, the *epidemic is now over*, though this is not yet announced by *authority*; and we may expect to see *sporadic* cases till the end of the year.

On the 20th September, having little or nothing to do at home, I made a visit to my friends in Mississippi, when I saw something of the yellow fever of Vicksburg and Jackson. I returned to New Orleans on the 7th of October, and found the city *uncommonly healthy.* Went up to the Charity Hospital on the 8th, and found ten wards closed for want of patients; yet I saw a few cases of yellow fever there.

October 8th.—The mortality for the week ending this day was one hundred and thirty-three, of which forty-two died of yellow fever; and of these, thirty-six died at the Charity Hospital; consisting chiefly of laborers and others, who had recently come to the city.

The following extract is from the last weekly summary of the epidemic that appeared in the Picayune:

The following is a table of the total interments, and of those by yellow fever only, which were certified to by the physicians, from the week the first yellow fever case was reported as terminating fatally, up to 6 A. M. yesterday morning:

		Total.	Yellow Fever.
Week ending on Saturday,	**May 28**	**140**	**1**
“ “ “	**June 4**	**142**	**1**
“ “ “	**June 11**	**154**	**4**
“ “ “	**June 18**	**147**	**7**
“ “ “	**June 25**	**167**	**9**
“ “ “	**July 2,**	**177**	**25**
“ “ “	**July 9**	**188**	**59**
“ “ “	**July 16**	**344**	**204**
“ “ “	**July 23**	**617**	**429**
“ “ “	**July 30**	**723**	**555**
“ “ “	**Aug. 6**	**1134**	**947**
“ “ “	**Aug. 13**	**1494**	**1262**
“ “ “	**Aug. 20**	**1534**	**1302**
“ “ “	**Aug. 27**	**1628**	**1365**
“ “ “	**Sept. 3**	**955**	**749**
“ “ “	**Sept. 10**	**576**	**421**
“ “ “	**Sept. 17**	**365**	**221**
“ “ “	**Sept. 24**	**263**	**125**
“ “ “	**Oct. 1**	**219**	**85**
“ “ “	**Oct. 8**	**133**	**42**
Total		**11,100**	**7813**
Cases in which causes of death were not stated in the last ten weeks of this table			**450**
Of these six-sevenths for yellow fever			**385**
Total of deaths by the fever since May 28			**8,198**

October 13th.—The Board of Health announce publicly that "*there is now no epidemic in the city, and that absentees and strangers may come in with safety.*" This announcement was welcomed with joy, and from this time people rushed in from all quarters. A few were attacked after their arrival here, but not severely; the malignancy of the fever having been greatly mitigated.

I stated, in my memorandum of the 17th September, that I considered the epidemic was really over then, although there was no public announcement to that effect. My opinion was based, not *alone* upon the great diminution of cases, but also upon *the change of type* that was visible in the new cases then occurring. Fevers of the *pernicious*, intermittent and remittent types became more common than yellow fever. In fact, the yellow fever type was gradually giving place to the remittent and intermittent, as will appear plainly in the statistics to follow. This is what always occurs, as I have completely demonstrated in my previous writings on the subject.

The number of deaths from yellow fever, for the week ending September 17th, was two hundred and twenty-one. Now, if we refer to the period when the deaths first got up to a similar amount, we shall find that it was the week terminating the 16th of July, when the deaths were two hundred and four. Thus, we have *two months* as the period during which it may be said *yellow fever prevailed as an epidemic.* This again corresponds with the observations of the past. We have more or less yellow fever in this city *every year;* but, after a constant residence here of twelve years, I must say I have never known it prevail *to an epidemical extent* for a longer period than *sixty or seventy days.* Some persons attempt to draw a distinction between *epidemic* and *sporadic* yellow fever; but this is *sheer nonsense.* If there be such a disease as yellow fever at all, you may see as *genuine a case* of it in a season when not more than a dozen of the kind occur, as in one presenting thousands of cases.

A *popular error* of extensive prevalence and long standing respecting yellow fever is, *that an epidemic can alone be extinguished by frost.* I demonstrated this to be an error in my histories of the epidemics of 1847 and '48; and the events of the present year fully confirm my previous observations. In 1847, the epidemic ceased long before the appearance of frost; yet sporadic cases were seen to a considerable extent till the end of the year. On the present occasion, the disappearance of the epidemic was published by the Board of Health on the 13th of October, while the *first frost* was announced on the 25th of October; and that was only observed on the outskirts of the city. On the 31st there was a much heavier frost; but by this time a large number of persons had returned to the city. It is true that some of them were attacked with the fever, as before stated; but the cases were generally mild, and easily managed. We shall, doubtless, continue to see scattering cases till the end of the year. The general remote cause of all the endemic fevers seen here, which, in its most virulent or powerful state, produces an epidemic of yellow fever, gradually undergoes modification in the progress of time; it becomes less virulent or powerful, and in proportion to the degree of this change, will it produce the milder types of fever. This position is illustrated by the remark of a highly intelligent practitioner of the 4th District, whom I met about the 10th of October. On being asked whether he saw much yellow fever at that time, he replied that "he saw a good deal of fever, but he hardly knew whether it was *yellow fever* or not." I asked him how the cases looked, if they became *dangerously ill or died?* He said "they then generally looked *precisely like yellow fever.*" Another professional friend in the same district told me a short time afterwards, that he had just been astonished at seeing a case of intermittent fever terminate in *fatal black vomit.* Such observations show that the prevailing *fever-cause*, which in August produced yellow fever in nine-tenths of the cases that occurred, had become so much weakened in October as to produce mostly the *remittent and intermittent types;* yet the relationship between them was still so close, that if the latter were not promptly cured they ultimately presented the worst features of the former.

The disease first prevailed to an *epidemical extent* in the region bordering on the junction of the 1st and 4th Districts, extending from the river back and around the Water Works, as I have more distinctly shown in the foregoing memoranda. It was shown that it also broke out in various other places quite remote from each other, and having no special or marked inter-communication. It is worthy of particular notice, that the *epidemic prevailed in the unpaved, and, of course, least improved parts of the city all around, long before it did in the central and best improved parts.* It is well known that the epidemic was not so bad this year on Chartres, Royal, Burgundy, Customhouse, Bienville, Conti, and St. Louis streets, as it was in 1847. Thirty years ago this region bore the chief brunt of the epidemic. This doubtless arises, in a great measure, from the fact that there are fewer unacclimated people in this region than in those so severely scourged at this day.

From this city, which was the starting point, the epidemic influence gradually expanded until it ultimately spread over a more extensive region around than was ever known before. Along the Mississippi river it extended from the Balize up to the mouth of the Arkansas, where the village of Napoleon was severely scourged. On Red river it went as high as Shreveport; on the Alabama river to Montgomery, the capitol of the State; on the Tombigbee, as high as Demopolis. It extended to Pensacola, in Florida; to Galveston, Houston, Indianola, Victoria, and other places in Texas. It prevailed terrifically in the village of Thibodauxville, on Bayou Lafourche, and also in some of the towns over in Attakapas. But let us get through with the epidemic in this city before adverting to its ravages in other places.

THE GENERAL CHARACTER OF THE DISEASE.

It seems to be generally conceded that the yellow fever of this year has been more malignant and unmanageable than any ever seen here before. Such at least is the opinion of the oldest practitioners with whom I have conversed, and I am quite confident it is true as far back as 1841.

The tendency to black vomit was more rapid, and there were more cases of this than usual. At the same time there were more *recoveries* from black vomit than ever before known. This will be more particularly noticed under the head of *special observations*.

I think that *head-symptoms* were unusually severe and dangerous. Many died in delirium and convulsions.

I think that *suppression of urine* was much less frequently observed in dangerous cases than formerly.

Hæmorrhages were exceedingly common, and often fatal. Many died of hæmorrhage from the nose, gums and bowels. Drs. Kennedy and Henderson told me of a very clever young man who died of hæmorrhage from the scrotum. Hæmorrhage, however, was not always an unfavorable symptom; on the contrary, it often indicated the approach of a salutary crisis. Indeed, it is *the natural crisis of this type of fever when its course is not interrupted by art.* How often have I hailed with joy the appearance of a moderate hæmorrhage from some *safe part*, as the nose, gums or uterus, in the critical stage of yellow fever, when it had been previously altogether uncertain how the case would terminate! At this stage of the disease, a small quantity of blood flowing spontaneously from any part except the *stomach* is most generally followed by the happiest effects, reducing any remaining febrile excitement and allaying nervous inquietude. When hæmorrhage sets in, however, there's no telling how far it may go. Believing as I do that it is a *natural critical discharge in this type of fever*, I would recommend that no efforts be made to check it whilst it is *within the bounds of safety;* but when it seems to threaten life, we should then resort to astringents, styptics, stimulants, and tonics.

Black vomit is nothing but hæmorrhage from the stomach, which may exist in any degree, from a few particles of blood mixed, as it were, into a quantity of light glairy fluid, presenting the appearance of floating dark specks or flocculi, to that of a rapid and profuse discharge of *pure red blood.* Before this discharge takes place, there is great engorgement of the mucous membrane lining the stomach. The hæmorrhage that then occurs is the effort of nature to relieve this engorgement; consequently, if the patient dies without throwing up much black vomit, we find the mucous membrane greatly engorged, thickened and red or livid; whereas, if the hæmorrhage had been *very profuse*, we find the mucous membrane after death pale and softened. Hence we may explain a fact that has been observed by many, viz., that *recovery is more apt to take place after free discharges of black vomit* than after *very slight.* The reason is obvious: in one instance nature effectually relieves the distressed organ by directly depleting its morbidly engorged blood-vessels; whilst in the other there is not a sufficient discharge to afford any relief.

When a patient is threatened with black vomit, the great indication is to remove that engorgement of the blood-vessels of the stomach which is its proximate cause; but of this I shall speak more fully when I come to the subject of *treatment.*

Discharges of precisely the same nature as black vomit take place from the mucous membrane of the *bowels*, presenting the same shade of color, from a brown to a deep black, and onward to *pure blood*, according to the activity of the hæmorrhage. This is an enlarged view of the true nature of black vomit, without being restricted to any *particular appearance* as alone characteristic of that discharge. If such a view had been taken by the intelligent physicians who saw the first cases that died of yellow fever at the Charity Hospital this year, we should not have had so much discussion as to whether the fluid found in the stomach was *too black* or *not black enough*, *too red* or *not red enough*, &c., to be *genuine black vomit.* If this term is to be restricted to *any special appearance* of the matters ejected from the stomach in fatal cases of yellow fever, I will venture to assert, that it cannot be shown in *a fifth part* of the cases. On the contrary, if it be used to designate *that critical hæmorrhage* from the stomach and bowels, of all shades and degrees, so often met with in fatal cases of yellow fever, then might we even go so far as to speak of a *white vomit.* The rice-water discharges of Asiatic cholera are admitted to be "*white hæmorrhages;*" and Sir Henry Marsh, of Dublin, calls some dropsical effusions "*white hæmorrhages;*"

then why may we not have a whitish discharge from the stomach in yellow fever, that is almost equivalent to the celebrated black vomit? In fact, *we do*; and I have often heard the remark made by physicians of the first respectability.*

Black vomit and other hæmorrhages rarly occur amongst full-blooded negroes, though I have heard of a number of cases this year, and seen one myself. Mulattoes and quadroons are almost as liable to them in yellow fever as white people, and quite a number have died of hæmorrhages this year. This difference between the black and mulatto must proceed from the mixture of races.

Black vomit is quite common amongst white children with yellow fever, but they are far more apt to recover from it than adults. I shall say more of this in another place.

Black vomit is by no means *restricted to yellow fever*, but is occasionally met with in other diseases, such as dysentery, cancer of the stomach, and the state of pregnancy.

There were various rumors afloat that this was not *genuine yellow fever*, or such as has generally prevailed here before, but something altogether different; some saying it was a "*modifed typhus*," others that it was "a species of *plague*," whilst others again called it the "*African fever*." For myself, I saw no just grounds for any such distinctions. Whatever typhoid symptoms it presented, are common in *prolonged cases* of yellow fever. I saw nothing at all resembling the descriptions of *plague*; and as for "*African fever*," I would like to know what is meant by the term. There is no part of Africa where so malignant a fever is generated as the yellow fever of America; and those who assert that this was an African fever, ought not only to point out its *distinguishing features*, but also show how it was introduced here. The truth is, the epidemic was nothing but an uncommonly malignant yellow fever, presenting all the characteristic symptoms of that disease as it is generally seen here, but in a more virulent degree. No two epidemics that ever occurred here were precisely alike, but each differed from the other, and required some slight modifications of treatment.

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*Since making these remarks last fall, in my History of the Epidemic at New Orleans, I have had the pleasure of reading Dr. Blair's recent and valuable work on *The Yellow Fever of British Guiana*, in which I find the following remarks: "The white, ropy, acid fluid, which is frequently ejected at the close of the second stage, in considerable quantities, and with much relief to the symptoms, is generally attended with considerable retching. This is the fluid which, during our epidemic, was called 'premonitory' or 'precursory' fluid, or '*white vomit*.'" (p. 80, 3d edition.) And again (page 82)—"As some time elapsed before the precursory or *white vomit* was distinctly recognized as a symptom of the malady, the number of cases in which it occurred is no doubt understated from the case books. It is shown, however, as might be expected, to occur oftener than black vomit. * * * * Black vomit generally followed the precursory vomit, but many cases of death have occurred after the latter only."

In the *American Journal of the Medical Sciences*, for April, 1854, may be found an admirable paper on *black vomit* by Dr. La Roche, of Philadelphia. This paper contains the most correct views of the *nature and composition* of this discharge, fortified by extensive researches into the writings of authors on yellow fever.

I deem it useless to give a general description of the symptoms of yellow fever, as they are to be found in all the works on the subject, though in the main they give a very imperfect idea of the disease. The general impression derived from reading descriptions of yellow fever is, that it is *a violent fever of a single paroxysm, lasting about seventy-two hours, and presenting strongly marked characteristic symptoms, by which it may readily be distinguished from all other types of fever.* I have not found it so; nor have I yet found the man who could always say correctly whether a case, examined *per se*, was yellow fever or not. I have already shown what differences of opinion were expressed about the first cases that appeared this year, and have only to add, that the same thing occurs here every year. The truth is, yellow fever is so closely allied to remittent and intermittent fevers, that no uniform and reliable distinction can be drawn between them in the early stages, and the only way we get at the fact that yellow fever is prevailing, is by observing the *final results*, whether in *death* or *convalescence;* and the former is by far the most conclusive of the two. Even in such an epidemic as this, thousands of cases occurred which no one would have thought of calling yellow fever, if it had not been generally known that many of the same character and appearance had terminated in fatal black vomit.

I need not say anything more about the general character of the disease this year, save that it presented every variety of aspect and type ever seen in yellow fever, from the mildest attack to the most violent, and showed such a tendency to death amongst *whites* who were for the first time exposed to it, as to demand the most prompt and judicious treatment.

On reflection, there is one other feature of this epidemic which is worthy of mention, and that is, *a tendency to relapse*, which presented itself in many instances. After the customary subsidence of the fever at the end of the third day, there would be a period of calmness lasting from twenty-four to forty-eight hours, and then the fever would kindle up again, and last for one day or more. This secondary fever was often very dangerous, though it frequently terminated happily. The interval of convalescence after the first attack was sometimes so long, as to appear more like *second attack* than a *relapse.* From two to four weeks have been known to elapse between two distinct attacks of the fever in the same person. Heretofore these relapses, or second attacks were not at all common. On the 4th of November I was called on board a steamboat, to see a gentleman who had just come down from the village of Warrentown, situated on the river just below Vicksburg, where the yellow fever had been very bad. He said this was the fourth attack or relapse he had suffered since July. He died of black vomit on the 8th.

The testimony before the sanitary commission, an abstract of which will presently follow, furnishes additional facts touching all these points.

SPECIAL OBSERVATIONS.

Under this head I shall notice some particular points, such as *recoveries from black vomit*, *second attacks* of yellow fever, attacks upon *creoles* or natives, and attacks upon *negroes*.

1. *Recoveries from black vomit.*—When *well-marked black vomit* is presented in a case of yellow fever, I consider the chance of recovery as but little better than *one in a hundred;* yet I shall be able to show quite a respectable number of recoveries from this desperate condition this year. I had two in my private practice, and several in my wards at the Charity Hospital. One of my private cases was a little Irish girl, aged about eight years; the other was a *black negro woman.* One of my cases at the hospital was a young Spaniard, whom I shall mention more particularly under the head of *treatment.* I also saw a mulatto boy, patient of Dr. Hester, who threw up black vomit copiously during twenty-four hours, and recovered. The youngest subject of black vomit I ever saw, was a white infant aged *five weeks*, who was born after the epidemic broke out. It died, as did also the mother, who was unacclimated.

Dr. Boyer, resident surgeon of the *Maison de Sainte*, informs me that there were *fifteen* recoveries from black vomit in that institution. Prof. Jones says he had *two* recoveries in private practice, and *eight* or *ten* at the Charity Hospital.

Dr. McKelvey says he had three recoveries in private practice, and some at the Charity Hospital.

Dr. Lindsay informs me he had six or seven recoveries from black vomit.

Dr. M. M. Dowler says he had four recoveries from black vomit—two women, one man, and one child six years of age. Dr. D. never knew adults to recover from black vomit before, but has known several children.

Dr. Wedderburn says he had four or five recoveries from black vomit.

Dr. Rushton says he had two cases to recover from black vomit.

Dr. Choppin, House Surgeon of the Charity Hospital, gives it as his opinion that *seven per cent.* of the cases of black vomit in that institution recovered.

Notwithstanding all this testimony to the fact of recovery from black vomit, one of the most prominent physicians of the city, who has practiced here near twenty years, tells me he never knew a case of *unquestionable black vomit* in yellow fever get well.

I have only mentioned the names of such of my professional friends as I happened to meet with, whilst taking down these special observations. It will be the same with those to follow. I might enlarge them to any extent if I had time and space.

2. *Second attacks of yellow fever.*—I mean by this, persons who have had the disease in former years. In my history of the epidemic of 1847, I mentioned that several instances of this were observed, and the same has occurred this year. There can be no doubt that if a person have a plain attack of yellow fever during the prevalence of a *severe* epidemic, there will be but small probability of his ever having it again, provided he remains in the same place; yet the rule is by no means *invariable*, as I shall presently show. If one has it, however, during a *mild* epidemic, or when there are only a few sporadic cases, his subsequent exemption will not be near so great. Thus there were numerous attacks this year among persons who had had other attacks since 1847, but not many among those who had it that year, or any previous *strong* epidemic. I am satisfied that the correct doctrine on this point is laid down in my "Report on the Fevers of New Orleans." (*See Southern Medical Reports, vol.* 1.)

I saw no case this year which had been attacked in 1847, but several who had the disease well marked in 1848 and subsequently.

Dr. Jones informs me that he saw one case this year in a person who had yellow fever in 1847, and one who had it in 1839.

Dr. Kennedy says he never attended a case of yellow fever in a person whom he had treated before for that disease. Dr. K.'s experience extends over a period of twenty years.

Dr. Lindsay tells me he treated this year at least a dozen cases who said they had had yellow fever before—some of them in 1847; but he cannot vouch for the accuracy of their statements. He had one case this year whom he treated last year in a well-marked attack. His last attack was mild, and only lasted two days.

Dr. Moses M. Dowler, who has practiced here seventeen years, says he never saw a second attack of yellow fever in a person whom he had himself attended, but a good many who said they had it the second time, and had been attended by others; he is disposed to believe that such instances have occurred.

Dr. W. Stone, and Dr. Sunderland also, say they never knew a second attack, and are disposed to doubt the testimony of those patients who told them they had the disease more than once. Both of these gentlemen are of opinion that second attacks of yellow fever are as rare as second attacks of small pox or measles. Dr. Stone even goes so far as to think that *acclimation once attained, is never lost by removal from localities where yellow fever prevails.*

It is needless to multiply quotations upon this point, as contradictory testimony and conflicting opinions might be obtained throughout the profession. The thing is at last reduced to a matter of opinion, and cannot be definitely settled. Those who have made up their minds that a person can have yellow fever but once, will not be convinced to the contrary by any facts that can be presented, and vice versa.

3. *Attacks upon Creoles or Natives of New Orleans.*—One of the most extraordinary features of this epidemic is presented in the fact that the natives of the city, both white and colored, have suffered severely, and many of them died of it. This is generally admitted, and beyond dispute. Children who were born since 1847 have suffered most; but many born previous to that time likewise suffered, and some of them died of black vomit. I saw two quadroon girls, sixteen and seventeen years of age, who were natives, and had never lived anywhere else—they had the fever severely, but recovered. A child, aged five years, in the same family, also had it. I attended a quadroon boy, about eight years of age, who had a severe attack, attended with hæmorrhage from the gums. I have already mentioned the case of a white infant, only five weeks old, that died of black vomit. It may be stated generally, that all children, and young persons in the city, who had never had yellow fever previously, were attacked this year. Of course there were some exceptions to this, as there are to every general rule.

I am informed that the Creoles on the coast, above and below the city, suffered much more from yellow fever than those in the city, many adults having died of the disease.

4. *Attacks upon Negroes.*—This epidemic affected unacclimated negroes, or those who had never had yellow fever before, as generally as it did the white population, though not so severely. This is equally true of the mixed races generally. It is a well established fact that there is something in the negro constitution which affords him protection against the worst effects of yellow fever; but what it is I am unable to say. During an epidemic he will take the fever almost, if not quite as readily as the white, but it will be altogether milder and less dangerous in its ten-

dency. In short, it will correspond more exactly with the bilious remittent fever that prevails in the country, and requires precisely the same treatment. And yet this type of fever in the city negro must be produced by the very same cause that gives rise to malignant yellow fever in the white race. Occasionally we see the hæmorrhagic diathesis of yellow fever displayed in the negro, but it is by no means common. The least mixture of the white race with the black seems to increase the liability of the latter to the dangers of yellow fever; and the danger is in proportion to the amount of white blood in the mixture. Very few negroes die of yellow fever in this city; but I learn that a considerable number have been lost on the plantations this year. The cause of this may readily be imagined when it is recollected that yellow fever never prevailed on the plantations before, and of course most of the physicians were not familiar with its treatment.

I consider the danger to negroes from yellow fever to be no greater than that from bilious fever in the country, and not half so great as from congestive intermittent.

Yellow Fever, September 1st 1867.

The Yellow Fever Epidemic still rages in this city. This has been a very fatal month, and thousands have had the disease, and about 700 citizens have died and 24 U. S. troops. Many are still down with the disease. Several of our physicians, viz: Drs. B. F. Clarke, R. G. Salmon, Surgeon Taylor, Medical Director of the State of Texas, Dr. Ulrich, Homœpathist, and Dr. Barnett, have died; Drs. W. H. Gantt, R. H. Hanna, Asst. Surg. C. R. Rowe, Asst. Surgeon Samuel Adams, Drs. Ernest Brake, Daniels and Tompkins, are now down with the fever; Drs. Watts, Garrett, Spann, Davis, C. R. Wilkerson and R. K. Smith, have had it and recovered; Drs. Chas. Trueheart and Henry Shearer have had light attacks, supposed to be second attacks, as they thought they had had the disease before.

So far, I believe, at least one in every five have died of those taken. So far as my own notes go and the City Hospital shows, I will state: City Hospital treated in all, patients and employees, 311, of these 78 have died; at U. S. Post Hospital, 164 have been treated, 27 have died; in my private practice I have treated 110 cases, and 8 have died; amongst these 26 children, and no deaths. Two recovered from black vomit, and seven grown persons have recovered, in all nine. I saw two children in articulo mortis, and I visited, in consultation with other physicians, twenty-two cases, of these six have died.

The type of the disease is the same as given in the August number. Many cases have turned yellow, about one in seven; about half of the deaths were from black vomit, and the others from congestion of the brain, suppression of urine and hæmorrhage.

But few children or negroes have died—only two out of thirty in all I treated of negroes. One employee of the hospital, (the laundress,) died, out of 21 employees during the month, all except the matron having had, or now have the disease.

The treatment in the City and U. S. Hospitals has been the same, as I have attended both during the month as prescribing physician, and I have pursued the same plan in private practice. The general plan has been to let the patient take as much ice lemonade or water as they wish, to put them in a mustard foot bath, and give them a dose of Castor Oil or solution of Citrate of Magnesia, or any mild purgative: this to be done in the cold stage, or in the first 12 hours. After that time these are omitted, as by this time the fever is usually at its height, and if the bowels have been moved I have given the following:

R. Hydr. Ch. Mitis.
Opii et Ipecac Pul.
Quinæ Sulphatis aa. ix grs.
M. T. C. No. 3. One every three hours.

If the fever is very high and skin dry, I give ten drops of Tinct. of Aconite, and other soudorifics according to circumstances. I also vary the proportions according to the case, and do not adopt any rotive practice. These powders repeated will break the fever, but if they do not I still repeat them, and I will say that when they have failed everything else fails. I cup, when there is a determination to the head or stomach; and I have bled four patients—one in articulo mortis, and one man twice, and did not break his fever and he died; the other two recovered—all bad cases. After the fever leaves I throw off all covering, except a sheet, or one blanket, which I prefer, and give plenty of beef tea in preference to anything else. If there is vomiting after the fever leaves I blister the stomach at once and give the following to prevent black vomit:

Brandy.
Water, aa. 1 oz.
Creosote, x grs.
Morphæ, ss gr.

Tablespoonful every two hours. If this fails everything else I have tried failed too; and with it I have cured all the nine cases mentioned. I have given the Oxalate of Cerium in from V to X grs. with good effect, and I believe it to be a most excellent remedy in all cases, both with or without fever, where there is vomiting. I have given the Valerinate of Bismuth to produce sleep and allay restlessness, with the most happy effect, where the patient tolerated the valerinate. I keep my patient at all times comfortable, neither too hot or cold; never let them get hungry or faint. I give pure brandy in preference to anything else, and an alkali when the stomach is acid. Prepared Chalk is my favorite. I eschew wine of all kinds, and porter and ale, except to the usually intemperate, but much prefer gin or brandy to all others, diluted to the patient's strength and taste. I prefer gin to brandy, where the urine is scant or suppressed. Many patients would sink after the fever went off without a timely dose of brandy, and unless the brain is congested it will promptly produce reaction.

I condemn the hot bottles, orange leaf tea, and hot drinks in general, and the application to the head of ice or cold water when the patient sweats. Allow fresh air, plenty but no draft; rooms must be well aired; no getting up to mugs, but use mugs in bed and bed pans; no exercise or sitting up for at least five days after all bad symptoms leave patient. Second day after fever leaves, the sheets may be changed in bed, and patient lying down, sponged off with brandy and warm water. No one should get up and fatigue themselves, or eat too much. Be prudent in all things for a month, and by all means avoid a relapse, as they are nearly always fatal, and the best treatment for relapse cases is none at all. Always keep patient in bed and comfortable, and counteract anything that may have caused a relapse. Plenty of cold water and nourishment as remedies, which in all cases should be animal food instead of vegetable, and black meats instead of white, or rather fibrinous than albuminous.

This so far has been my course, and I give the statistical results. I endeavor to see my patients at least twice each twenty-four hours, and three times if possible, as the disease is the most changeable and insidious I have ever treated. I say nothing of diagnosis, as good descriptions are in any book on practice, and this epidemic is no exception nor any worse than others described by all authors I have read. I have used all the other remedies recommended, but they have disappointed me.

Books, Pamphlets and Journals Received.

JOURNALS REGULARLY RECEIVED:

American Journal of Dental Science, Baltimore; August.
American Naturalist, Salem, Mass.; August.
Atlanta Medical and Surgical Journal; August.
Boston Medical and Surgical Journal; July and August.
Buffalo Medical and Surgical Journal; August.
Braithwaite's Retrospect; August.
Detroit Review.
Medical and Surgical Reporter, Philadelphia; August.
Medical News and Library; August.
New York Medical Journal; Vol. III, No. 2
Nashville Journal of Medicine and Surgery; August.
Richmond Medical Journal; August.
Southern Medical and Surgical Journal; August.
Southern Journal of the Medical Sciences; August.
St. Louis Medical and Surgical Journal; August.
The Medical Record, New York; August.
The Medical Reporter, St. Louis; August.
The Dental Cosmos; August.
University Journal of Medicine and Surgery; August.
Zeitschrift fur Practische. Heilkunde. July and August.
The American Journal of Medical Science, Philadelphia, new series, August.
Phrenological Journal, New York.
The Druggist's Circular; August.
Chicago Medical Examiner; August.
Chicago Medical Journal; August.
The Agriculturalist, New York; August.
The Eclectic Journal of Medicine; August.
The Medical Investigator; August.
The Medical Gazette, a Weekly Review of Practical Medicine, Surgery, and Obstetrics; A. Simpson & Co., Publishers, New York; September.

THE NEW SYDENHAM SOCIETY.

The following extract from the Laws of the Society will sufficiently explain its objects:

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RICHARD J. DUNGLISON, M. D.,
Hon. Local Secretary, 1116 Girard Street, Philadelphia.

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Vol. 1. Diday on Infantile Syphilis. 2. Gooch on Diseases of Women. 3. Memoirs on Diphtheria. 4. Van Der Kolk on the Spinal Cord, etc. 5. Monographs (Kussmaul & Tenner, Graefe, Wagner, etc.)

1860. (SECOND YEAR)

Vol. 6. Dr. Bright on Abdominal Tumors. 7. Frerichs on Diseases of the Liver, vol. 1. 8. A Yearbook for 1859. 9. Atlas of Portraits of Skin Diseases, (1st Fasciculus.)

1861. (THIRD YEAR.)

Vol. 10. A Yearbook for 1860. 12. Monographs (Czermak, Dusch, Radicke, etc.) 12. Casper's Forensic Medicine, vol. 1. 13. Atlas of Portraits of Skin Diseases, (2d Fasciculus.)

1862. (FOURTH YEAR.)

Vol. 14. Frerichs on Diseases of the Liver, vol. 2.) 15. A Yearbook for 1861. 16. Casper's Forensic Medicine, vol. 2. 17. Atlas of Portraits of Skin Diseases, (3d Fasciculus.)

1863. (FIFTH YEAR.)

Vol. 18. Kramer on Diseases of the Ear; 19. A Yearbook for 1862. 20. Neubauer and Vogel on the Urine.

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Vol. 21. Casper's Forensic Medicine, vol. 3. 22. Donders on Anomalies of Accommodation, etc., of the Eye. 23. A Yearbook for 1863. 24. Atlas of Portraits of Skin Diseases, (4th Fasciculus.)

1865. (SEVENTH YEAR.)

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SESSIONS OF 1867—1868.

The Collegiate year in this institution embraces a Preliminary Autumnal Term, the Regular Winter Session, and a Summer Session.

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The Regular Session will commence on Wednesday, October 16, and end about the 1st of March. 1868.

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For the Annual Circular and Catalogue, giving regulations for graduation and other information, address the Secretary of the College, Prof. Austin Flint, Jr., Bellevue Hospital Medical College

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CATALOGUE

OF THE SESSION OF 1866-7,

AND

ANNUAL ANNOUNCEMENT

OF

GALVESTON MEDICAL COLLEGE

FOR THE SESSION OF 1867-8.

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THE
Galveston Medical Journal.

VOL. II. OCTOBER, 1867. No. 10.

Hæmaturia Miasmatica.

BY JNO. STAINBACK WILSON, M. D.,
Of Bedi, Grimes County, Texas.

In the August number of this Journal, Dr. Starley has an article under the head of Recurrent Hæmaturia Miasmatica, which he conceives to be "a very rare, as well as fatal form of disease." Having had an attack in my own person, and having witnessed several other cases in a region in Alabama, where malignant intermittent and congestive fevers were quite prevalent, I am disposed to think that the disease is not as rare as our writer supposes. But this opinion is founded not so much on the number of cases occurring in my practice, as it is on my views as to the pathology and etiology of the disease. Dr. Starley is undoubtedly right in regarding the disease "as a congestive form of intermittent fever, the stress of which is thrown upon the kidneys." This is conclusively shown by the regular recurrence of the hæmaturia with the chill, and by its disappearance with reaction. The occurrence of this form of profuse hæmaturia only in malarial regions is an additional proof if any more could be required. Now, we all know that in all chills there is a centri etal determination of the fluids, with more or less congestion of the internal organs. This lost balance of the circulation exists, to some extent, even in the slightest chill; and in those cases called congestive chills, the pathological condition is the same as in slighter cases, differing only in *degree*, and not in kind. The sanguineous afflux, constituting congestion, may be to any, or all the internal organs, but it is more likely to be to the great vital and highly vascular organs—the brain, the lungs, and the stomach. Next to these, the bowels are perhaps oftenest the seat of congestion, excepting, of course, that great blood reservoir and blood diverticulum—the spleen, which might with propriety be called the *feverometer* of the human organism.

Next in order, I think the kidneys come, on account of their great functional activity, their intimate connection with the skin, and their great sensitiveness to impressions made on the nervous system. And let me remark, *en passant*, that this nervous influence is, in my view, a prime element in the pathology of all periodical fevers, disorder of the nervous system or want of nervous equilibrium being the first link in the chain of morbid action, which is the cause of the more manifest vascular disturbance.

This being so, is it strange that the kidneys should become the seat of congestion, when we call to mind the profuse discharge of limpid urine caused by the nervous excitation of hysteria, and the frequent urination of persons in health, when the mind is excited by fear, anxiety, or any other strong emotion? I would not have the inference made that I intend by these illustrations to prove that the condition of the kidneys is the same in the cases mentioned, as in the congestion giving rise to hæmaturia. My object is simply to show the controlling influence of the nervous system over the renal secretion. It is not strange then that the kidneys should become congested in periodical fevers; and this cannot be a *very* rare occurrence, though we might be led to believe this from the paucity of reported cases. My conclusion, drawn from what I have seen in my own practice, but more from the physiological action of the kidneys, and the pathology of periodical fevers, is that congestive hæmaturia is by no means a very infrequent phenomenon in those fevers; and that it would be seen much oftener were it not on account of the comparatively small size of the kidneys, and their dense texture. For it is reasonable to suppose that the large spongy structure of the brain and lungs, and the widely-expanded, highly-vascular and yielding mucous membrane of the intestinal canal, would be more prone to congestion than the small, dense, closely-compacted and fibrous-structured kidney.

A few words in conclusion, on the treatment. Dr. Starley says: "Of course, from the periodic character of the disease, and its evident dependence on malarial poisoning, quinine entered largely into the treatment." This is certainly correct in theory and in practice. In my own case, and in the others which I treated, I relied exclusively on quinine in free doses in combination with small doses of morphine. The quinine was given in about five grain doses, with one-eighth of a grain of morphine every half hour or hour, according to the urgency of the symptoms, till reaction took place. This was aided by hot pediluviæ, followed by dry rubbing with corn meal and mustard, which I regard as the best means of procuring reaction in congestive cases. After the reaction, the quinine was continued so as to keep the system fully under its influence until all danger of another paroxysm had passed.

If a cathartic was required, it was given *after* the time for the paroxysm, or in alterative doses, in combination with the quinine, so as not to act before that time. I regard the action of a cathartic about the time of a chill, and especially a congestive chill, as hazardous. And admitting that there is no danger to be apprehended from catharsis, no time should be lost in preparing the system for the *febrifugum magnum*, the true, I might say the almost sole curative agent in congestive fever. The morphine was given not to allay pain, but in small doses to aid the equalizing action of the quinine, by its gently stimulating diffusive effect on the circulation.

Nothing whatever was given for the hæmorrhage, for though quite free, I did not anticipate any danger from excessive depletion, before reaction could be brought about, on which, and on the prevention of another paroxysm, I felt assured the salvatio of the patient was suspended. In my own case, which was quite severe, with a very copious discharge of blood from the kidneys, and great dyspnœa from congestion of the lungs, I used quinine alone during the paroxysm—continued it during the interval, preventing a recurrence; and I convalesced rapidly, returning to my professional duties again in about ten days. Under this, or a very similar course of treatment, I have lost no case; having had two cases of well marked hæmaturia besides my own; to say nothing of several slighter cases in which the urine was strongly tinged with blood.

I have no confidence whatever in hæmostatics in this affection; for I consider them both useless and injurious. Useless, because the danger is not really from the hæmorrhage, but from the loss of nervous and vascular equilibrium, and the consequent depression of the vital powers. Injurious, because they irritate the stomach, and take the place of more appropriate remedies.

In conclusion, I will only say, that if I may judge from my limited experience in this particular form of congestion, substantiated by an ample experience in congestions of various other organs, but few cases will prove fatal if quinine be used freely during the chill, and in the interval, so as to prevent a recurrence.

Resection of the Femur.

PETER SWEENEY, Freedman of Brazoria Co., Texas, Dec. 15, '63.

BY THE EDITOR.

During a visit to Columbia, in December, 1863, I was called to see Peter Sweeney, a colored man, who had had a compound comminuted fracture of the thigh about three inches below the great trochanter. The injury was produced by a fall from a tree from which he was gathering pecans, and the bone had been driven in the ground. The leg had been cleaned and dressed by Drs. Morris and Porter, of Columbia, and put in proper splints some thirty days before I saw the case, but the bones had not united, and had formed a suppurating abcess. It had been proposed to amputate the limb at once, but the injury was so high up that the results were considered doubtful, and when I was sent for it was to amputate the limb, but I deemed it unsafe and altogether unnecessary, so I determined to resect. December 15th, assisted by Dr. A. T. Morris, I resected the bones, taking out at least three and a half inches of the femur. Upon opening the wound about one quart of pus poured out and the abcess had extended to the capsular ligaments so I could run my hand up and feel it. I found several loose pieces of bone and the ends ulcerated, and an attempt at natural amputation. I desected up the two ends and sawed off the ends as high each way as the periosteum was severed and then cleaned out the abcess as clean as possible. The incision was made over the opening in the abcess, cutting quite through it and on the outer and anterior portion or where the leg was dressed. I put it in one of Morses' splints, and pushed the two ends of the bone together, and left it in that condition, telling Mr. Sweeney and the Doctor to open the abcess below on the underside, if it did not stop the running; which was done after a short time. The man continued to improve, and finally recovered with a strong and sound leg, on which he walks with only a slight limp and without crutches.

Remarks.—I do not believe this patient would have recovered from amputation, either at the time of the injury or at any time before or after I saw him.

The result also shows what may be done by resection. The ends would never have united if they had not been forced up together, even after the parts were resected. This has been a fault in at least one instance of resection, where the limb was preserved of its natural length—the arm. The result was, though well resected, there was no union, and intense neuralgia followed.

This man suffers no inconvenience and the limb appears to b as strong as ever. There is no danger from resection in such cases, or comparatively little, but great danger in amputations so high up. This, in consideration of a good but short leg, ought always to determine the Surgeon to try resection, and if that fails he still can amputate with about the same prospect of success.

Venereal Diseases:

SYPHILIS—POCK. GONORRHŒA—CLAP.

SYPHILIS.—This disease has excited a great deal of interest of late years, and we have many new monographs upon the subject. Prof. Bumstead, of New York, Dr. Durkee, of Boston, and Dr. Blackman, of Cincinnati, have each, in the last few years, written extensively on this disease and its corrollary Gonorrhœa. In other countries we have quite an array of authors—Diday, Deissl, &c. These men differ in opinion, as did Ricord and Vidal, and the medical world is still divided between the Unicists and Dualists, and I may say Pollisists. Blackman, following the opinion of Vidal, etc., that the poison of Syphilis and Gonorrhœa are one and the same, (that is they are Unicists), and that the matter of a Gonorrhœa will produce by inoculation Syphilis or a regular Hunterian chancre, and vice versa an Hunterian chancre will produce a Gonorrhœa or a Balanitis, and insists that this has been most positively proven by experiment, and that even the blood may be taken from a case of secondary Syphilis and be inserted into the arm and it will produce an ulcer, from which pus may be obtained, and an application to the urethra will produce a regular Gonorrhœa or chancre, according to the peculiar constitution or state of general health at the time of application. *This* *is my belief and I think it will prove true*, and it at least is necessary to the proper treatment, as all admit secondary symptoms occur from both chancres and blennorrhagias.

Durkee, Ricord, and others, are regular Dualists, and do not believe that a Gonorrhœa can ever produce a chancre, or a chancre a Gonorrhœa, and that the poisons are distinct and independent—the one (Syphilis) requiring constitutional treatment, the other not. One produces secondary symptoms of an ulcerative type, attacking the different tissues, and even the bones (Tertiary Syphilis), the other only showing itself in eruptions on the skin. Prof. Bumstead divides the poison into three different kinds—Gonorrhœa, Chancre and Chancroid, making the Pollisists.

Now it is well known, and cannot be disputed, that there are three forms of ulceration in Gonorrhœa, which is simply a blennorrhagia or mild inflammation, and scarcely ever produces ulceration, but often buboes, which do ulcerate—then a simple running ulcer, without indurated edges, and curable by mild and non-mercurial means, and producing scarcely ever, if ever, any secondary symptoms. This form of ulcer is chancroid or chancre-like, but not chancre.

Chancre being known by first appearing as a small pustule with indurated edges, and becoming indurated and chronic in its character, finally corroding the parts and passing into the system producing the various forms of skin diseases termed Syphiledes, ulceration of the throat, buboes, nodes and caries of the bones, etc., and is also transmissible by hereditations or through mothers' milk to infants that are healthy at the breast, as in cases reported of nurses communicating it to their charge. That chancre does spread by inoculation and from vaccination with the blood of a syphilatic subject, and that a nurse may, through her milk, give the disease to her charge all parties now agree, but the Dualists and Pollisists do not believe these can take place from a patient afflicted with Gonorrhœa or Chancroid. This is the distinction that I wish to call the attention of the reader to at the present time. All sypholograpers and investigators are now endeavoring to ascertain if these two schools can be reconciled, and if the reported cases of inoculation with gonorrhœal matter is true, if it is utterly impossible to so communicate the disease. This is a very important fact, and one that every medical man is more or less interested in, especially, as I before stated since, all believe that one form may be propagated by inheritance, inoculation and imbibation, through milk, and even through the blood applied to an abraded surface from a chancerous surface.

In view of all these opinions and facts, we deem it best to consider all as infectious and inoculative, and to keep our patients on secondary treatment or prophylactics against secondary symptoms. If it was positively proven that there were two or more different viruses, then the simple course recommended would be sufficient, but as there is a doubt, and that doubt might lead to fearful if not fatal results our patients should have the benefit of that doubt.

DIAGNOSIS.

GONORRHŒA—*Blennurethisis.*—The most simple form of venereal disease is known by the following symptoms:

A pustular discharge from the urethra of both sexes, generally coming on in from three to seven days after infection—and affecting the prepuse in males and the vagina in females. At first the discharge is thin and mucous, and gradually becoming green or yellowish green, attended with a burning and itching sensation in urinating, (chaude pisse); attended with painful excretions, (cordee), and a reddening and swelling of the glands or clitoris, and an enlargement and thickening of the corpus spongiosum.

These symptoms continuing, there will be swelling in the groins (buboes) and a rash on the skin. These symptoms will continue indefinitely unless relieved by treatment. Persons, either male or female, may communicate this disease to another at any time while there is any discharge of pus. It is now conceded by nearly all writers that the female suffering under Leucorrhœa, after menstruation, or in cancerous ulceration, may produce the disease in the male, and from him it is generally propagated by copulation. This form of the disease scarcely ever ulcerates, but does so occasionally, and from this ulceration inoculation of syphilis has been reported, and no doubt truthfully.

Syphilis— *Variola Magna—Pock.*—This disease is known by its first forming a vesicle or pimp, and then a pustule, and then an ulcer, and finally ulcerations and ulcerative eruptions (*maculatas*), ulcerations of the throat, loss of hair, general debility and death.

It is generally slow in forming—first a little white speck, then a hard red core, and then a pustule which bursts and ulcerates, forming red copper-colored edges, and continues to ulcerate and to break out at other points. These pimps usually first form on the glands penis, or on the prepuce and skin of the penis, on the scrotum in males, and on the labia majora and minora of the female, or on the mouth of the womb, on the sides of the vagina, and on the thighs. It rarely attacks the urethra in females, but often produces a difficulty in urination by the swelling that follows up the chancre. This disease and gonorrhœa are often found in the same subject, and may possibly be the grounds of the two diseases being declared one. Chancre has been divided into several varieties: *Chancre Simplex*, not liable to produce constitutional symptoms, and heals without mercury; *Chancre Indurata*, or indurated pustules with livid indurated edges, and liable at any and all times to produce consecutive diseases.

I use the word consecutive in the sense Vidal does, that is any form of syphilis that is constitutional, as ulcerations of the palate, Syphilic Ophthalmia, the Syphiledes and tertiary symptoms of Ricord, as ulceration of the periosteum, or caries of the bones and buboes.

The consecutive symptoms may appear from the absorption of the virus without the primary ulcer ever appearing, or if having appeared not to have attracted notice.

Phegedœnic Chancre—where the ulcer sloughs and is liable to slough off the glands penis, or even the entire organ, or where a bubo continues to burrough and will not heal, this form never proving to have produced constitutional disease, the poison seeming to be thrown off by the sloughs and not to be absorbed. This is the most dangerous form of the disease, and often destroys the penis or proves fatal.

Chancroid—Simple chancre is not a serious disease; it v sometimes subside without treatment, leaving the system healthy. It may be cured without mercury. Dr. Bumstead thus diagnoses this form of venereal disease, giving it a special virus and not running into the other forms of the chancre.

DIAGNOSTIC CHARACTERS OF THE CHANCROID AND CHANCRE.

THE CHANCROID—*Origin.*—Always derived from a chancroid, or virulent bubo. Has no period of incubation.

Anatomical Characters—Generally multiple, either from the first or by successive inoculation.

An excavated ulcer, perforating the whole thickness of the skin or mucous membrane.

Edges abrupt and well-defined, as if cut with a punch, not adhering closely to subjacent tissues.

Surface flat but uneven, "worm eaten," wholly covered with grayish secretion.

No induration of base unless caused by caustic or other irritant, or by simple inflammation; in which case the engorgement is not circumscribed, shades off into surrounding tissues, and is of temporary duration.

Pathological tendencies—Secretion copious and purulent, auto-inoculable.

Slow in healing. Often spreads and takes on phagedenic action.

May affect the same person an indefinite number of times.

Characteristic Gland Affection.—Ganglionic reaction absent in the majority of cases. When present, one gland acutely inflamed and generally suppurates. Pus often inoculable, producing a chancroid.

Prognosis.—Always a local affection, and cannot infect the system. "Specific" treatment by mercury and iodine always useless, and, in most cases, injurious.

THE CHANCRE—*Origin.*—Always derived from a chancre or syhpilitic lesion. Has a period of incubation.

Anatomical Characters.—Generally single; multiple, if at all, from the first; rarely, if ever, by successive inoculation.

Frequently a superficial erosion; not involving the whole thickness of the skin or mucous membrane, of a red color and nearly on a level with the surrounding surface. Sometimes an ulcer, when its edges are sloping, hard, often elevated, and adhere closely to subjacent tissues.

Surface hollowed or scooped out, smooth, sometimes grayish at centre.

Induration firm, cartilaginous, circumscribed, movable upon tissues beneath. Sometimes resembles a layer of parchment lining the sore. Generally persistent for a long period.

Pathological Tendencies.—Secretion scanty, chiefly serous; inoculable with great difficulty, if at all, upon the patient or upon any person under the syphilitic diathesis.

Less indolent than the chancroid. Phagedena rarely supervenes and is generally limited.

One attack affords complete or partial protection against a second.

Characteristic Gland Affection—All the superficial inguinal ganglia, on one or both sides, enlarged and indurated; distinct from each other, freely movable; painless, and rarely suppurate. Pus never inoculable.

***Prognosis.*—A constitutional affection. Secondary symptoms, unless prevented or retarded by treatment, declare themselves in about six weeks from the appearance of the sore, and very rarely delay longer than three months.**

We have thus given, as near as possible, the present position of venereal pathology, and as we before stated, these points are still under investigation, but for ourselves, from all we have read and seen, we have come to the simple conclusion, that all venereal diseases have one cell formation—that the pus contains the same cell, whether a Blennorrhœa or a bubo, or the pus from a chancre—and that it has originated from the impure connections with women with the whites, and that it still occurs and is occurring every day. Within a short time I have treated a man and his wife—one for a Leucorrhœa, with hæmorrhages, and the other for a bad case of Blennorrhœa. I have no right to doubt either's words, and they had talked over the matter with each other before I was called, which to my mind gave truth to their statement. Another gentleman, in whom I have entire confidence, applied the same week and was treated for a pretty severe case of Gonorrhœa, and was cured, and afterwards for an eruption on the scrotum and thighs of a syphilitic character. He protested his entire innocence, and I did not once doubt him, as I had known him long, and had been intimate in his family, attended his children and wife, and himself, for four years before.

TREATMENT.—I have only a few practical hints in the way of treatment. As to Gonorrhœa, we have already given our treatment for this disease in a late number of the Galveston Medical Journal, and shall not repeat what we there said.

Primary Syphilis.—As I assume that the various forms are one and the same in nature, I treat them all on general principles.

If I see the chancre before it becomes so large that I cannot remove it, I lift it up with a forceps and cut it off with the scissors or a knife, and then dress with simple cerate and give internally Iodide of Potash and Syrup of Sarsaparilla, or watery solution of Iodide of Potash. I continue this for four or six weeks, and if there are any indurations of the skin around sore, I add Corrosive Sublimate to the solution forming the Biniodide of Mercury. Thus—

Potassæ Iodidi, vi drs.
Hydr. Ch. Corrosivæ, ii grs.
Syrup Sarsaparilla, i quart.

Tablespoonful three times a day, two hours before each meal. Continue this until I cure the disease. If it salivate I stop all medicines and feed my patient. I allow them their usual diet in all forms of veneral disease.

If the chancre is too large to be cut out, or burnt out with caustic, I make a solution of the Chloride of Zinc, thus—

Zinci Chloridi, xxx grs.
Aquæ Pluvialis, 1 quart.

Bathe the sores well after washing the parts, and saturate some lint and place over sore—continue this treatment, if the ulcer begins to heal; if not I use the Black or Yellow Wash in the same way. If any of these produce ulceration, as they will sometimes, I use Tannin—

R. Tannin, i dr;
Aquæ Pluvialis, i quart;

in the same way, or Tincture of Gum Myrrh. From the ulcer I can generally tell which of these will be the most useful. The Black and Yellow Washes are best for indurated chancres; the Zinc for the soft or chancroid ulcers, and the Tannin alone does good in the Phagædenic. Where the patient is debilitated I give Quinine and Belladonna or Cicuta.

For all the Syphiledes, the above form of Mercury and Iodide of Potash has proved successful in my hands, not having to use anything else in an otherwise healthy constitution.

Buboes are the most tedious form of the disease and the hardest to remove. I usually blister them and apply Iodide of Mercury Ointment over the blistered surface, lance them when they have pus in them, and generally when they form pus and it is let out they soon recover. But it is best to produce resolution if possible, and this we should endeavor to do.

In ulceration of the throat, I have mostly relied on the internal prescription given above, but have often found the Syrup of

Iodide of Iron, made of Glycerin, an excellent remedy—teaspoonful three times a day. I also cauterize with Zinc, x grs. to ounce, and Nitrate of Silver, as in primary ulcers.

In Syphilitic Ophthalmia, I use compression over the lids, Mercurial Ointment on the lids, and Atropine solution, ii grs. to an ounce of water, internally on the conjunctiva. This has generally proved successful, and I have not lost an eye yet from this disease. In caries of the bones and ulceration of the nasal cartilages, I apply the Zinc solution three or four times a day, with the Ether-Spray Apparatus, or with a syringe.

Of Strictures and Hypospadias I have already written my experience; also perineal fistulas, of which I could report some eight new cases successfully treated.

[Extracts from Dr. Fenner, on Yellow Fever.]

The Epidemic of 1853 at New Orleans,

[CONCLUDED.]

FEVER STATISTICS.

In my previous memoranda frequent allusion was made to the various types or kinds of fever that were designated in the reports from the cemeteries during the prevalence of the epidemic. The following table will show the principal types of fever that appeared in the mortuary reports of the Board of Health during the months of June, July, August and September:

FEVERS.	DEATHS.			
	June.	July.	August.	September.
Scarlet	16	1	1	0
Typhoid,	13	29	18	8
Typhus	15	3	17	4
Remittent Bilious	17	14	9	2
Congestive	12	24	20	8
Pernicious	13	10	59	30
Cerebral	6	6	22	0
Malignant	1	6	5	3
Uncertain	3	2	6	1
Intermittent	1	7	8	1
Yellow	46	1380	4797	722
Total	143	1482	4962	779

Various names of fever found on the reports from the cemeteries, such as nervous, hectic, Chagres, putrid, ataxic, worm fever, etc., have been omitted, as the cases amount to but few.

From this table it will be seen, that in the month of June the deaths from all the fevers specified amount to 143; of which yellow fever, 46. In July, all fevers, 1,482; yellow fever, 1,380. In August, all fevers, 4,962; yellow fever, 4,797. In September, all fevers, 779; yellow fever, 722.

The total number of deaths from all fevers during these four months, as published, was 7,472; of which 6,945 died of yellow fever, and 527 died of other types.

From these mortuary statistics it will be seen that during the reign of the great epidemic, which slew its thousands, people likewise died of all sorts of fever. The statistics of the living, which I shall now present from the Charity Hospital, also show a similar variety of fevers prevailing together, though in somewhat different proportions:

TABLE *showing the number of patients admitted into the New Orleans Charity Hospital, for all diseases and for all kinds of fever, during each month of the year* 1853.

1853. FEVERS.	January.	February.	March.	April.	May.	June.	July.	August.	Sept.	October.	Novemb'r	December	Totals.
Intermittent	272	193	207	168	223	314	335	181	112	229	237	169	2640
Remittent..........	41	28	18	21	26	79	126	15	21	34	12	21	442
Continued	13	14	5	16	8	11	6	1	2	1	0	1	78
Typhoid	44	20	14	16	16	13	8	2	2	2	22	9	168
Typhus	63	39	44	36	6	8	2	0	0	0	5	10	213
Congestive.........	7	2	1	0	2	3	4	4	6	0	0	0	29
Ephemeral	6	1	3	3	9	5	10	11	15	4	4	2	73
Pernicious.........	0	1	0	0	1	7	5	7	6	1	1	1	30
Scarlet............	0	0	4	0	2	1	0	0	0	0	0	1	8
Yellow............	0	0	0	0	5	50	1157	1495	350	142	14	4	3217
All fevers	446	298	296	260	298	491	1653	1716	514	413	295	218	6898
All diseases.......	1196	928	972	918	916	1127	2096	1940	874	870	923	990	13590

From this table it will be seen that the admissions for all diseases amount to............	13,590
Of which there were admitted for all fevers...	6,898
" " Intermittent fevers..................................	2,650
" " Yellow fever.................................	3,217

If we now examine the five months during which yellow fever chiefly prevailed, viz: June, July, August, September and October,

we shall find that the admissions for all fevers were........	4,703
Of which not quite two-thirds were yellow fever..........	3,194
" more than one-third were intermittents........	1,171
The balance, of various types..........................	338
	4,703

These statistics will doubtless surprise those who are under the impression that when yellow fever prevails as an epidemic, all other types of fever vanish from the field. And furthermore, when we take into consideration the established fact, that these different types of fever prevailing together, are often merged into one another, it appears to me to indicate the existence of a close relationship between them. In the mass of testimony from various quarters, which I shall present in this paper, I hope the reader will bear in mind the fact noticed both here and elsewhere, that physicians often supposed they were treating bilious remittent fever, until they saw the disease terminate in black vomit. In my previous writings on the fevers of New Orleans, (*N. Orleans Med. and Surg. Journal, and Southern Medical Reports,*) I have given the statistics of a number of years, tending, as I think, to establish this point; but the reader may think differently. The intermittent and remittent bilious fevers of a sickly summer and autumn in the country, are known to interchange type, or run into each other, and are generally considered varieties of disease, arising from a common remote cause. The very same thing takes place in respect to the intermittent, remittent, and yellow fevers of this city. What it is in this locality that gives rise to the variety or type of endemic fever, called yellow fever, I cannot tell; but the facts surely stand as I have presented them.

The number of yellow fever cases admitted into the Charity Hospital this year, was not so great in any month as it was in 1847, whilst the proportion of intermittents was greater: thus, in the month of August, 1847, the number of yellow fever cases admitted was 1,611, and of intermittents, 74; whilst in 1853, in August, the yellow fever cases were 1,495, the intermittents, 181. There would have been more admissions in 1853, but for the many temporary hospitals that were established by the Board of Health, and the Howard Association, which greatly relieved the Charity Hospital.

There having been 3,052 cases of yellow fever admitted into the Charity Hospital, and 1,765 deaths during the four months stated, it follows that the mortality was 57½ per cent. Considering the malignancy of the epidemic, and the late stage in which a majority of the cases were admitted, this rate of mortality is by no means discreditable. From a report to the Board of Administrators on the 1st of October, by the house-surgeon, Dr. Choppin, I find the following items relative to the length of time the patients were sick previous to admission, in 1600 fatal cases:

516 sick	1 day or less.
319 "	2 days.

242 sick	3 days.
206 "	4 "
76 "	5 "
38 "	6 and 7 days.
200 "	8 days.

From this it is evident that upwards of a thousand cases were admitted when the disease had already reached its second stage. Dr. Choppin further states, that 168 of these cases were in *articulo mortis* when admitted. He estimates that about 7 per cent. of all the cases of black vomit in the hospital this year recovered. This, if true, is extraordinary.

Dr. Jewell, of Philadelphia, gives a table of 44 cases of yellow fever in that city last summer, which shows a mortality of 80 per cent. Of 11 cases treated in the Pennsylvania Hospital, 4 recovered. In the Blockley Hospital, there were 3 cases, and 1 recovery.*

It is difficult to draw anything like a fair comparison between the results of treatment in the Charity Hospital and in private practice, on account of the advanced stage of disease in which patients generally are when they apply for admission, especially in yellow fever and cholera. For the latter disease they seldom apply until they are on the verge of collapse, and too often when perfectly hopeless. Fifty per cent. is about the general average of mortality from yellow fever at this hospital in epidemic seasons. Sometimes it is much greater.

SISTERS OF CHARITY.

I have ascertained from enquiry of the acting sister Superior, that when this epidemic broke out, there were twenty-two sisters of charity on duty at this hospital. Of these, 15 never had yellow fever previously, and 7 had. Six took the fever this year, and four of them died.

Of the 9 sisters who have escaped yellow fever thus far, 1 has been here 19 years, with the exception of 3 years absence;

1	has been	here	16 years (continually.)
1	"	"	13 years.
2	"	"	3 years.
1	"	"	2 years.
2	"	"	1 year.
1	"	"	6 months before the epidemic.

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*Quarterly Summary of the Transactions of the College of Physicians of Philadelphia, October, 1853.

Of the recoveries, 1 had been in the hospital 3 years, and 1 two years.

Of the deaths, 1 had been there 6 years.
1 " " 1 year.
2 " " 3 months.

Of the 7 who had had the fever previously—
2 had been here 10 years; had it in 1843–4.
1 " " 11 years; " 1842.
2 " " 2 years; " 1852.
1 " " 10 years; " 1844.
1 " " 7 years; " 1847.

These statistics afford but little support to the advocates of contagion. The sisters of charity in this institution do not nurse the patients, but are very often in the wards, and direct the administration of all the prescriptions.

I will now give such reports and statistics as I have been able to procure from the other hospitals, prisons, asylums, and benevolent societies in the city, and first

THE MAISON DE SANTE.

This was formerly Dr. Stone's private infirmary, but is now in the possession of the Sisters of Charity, who keep it in beautiful style. They employ Dr. Stone and Dr. Wedderstrandt as consulting Surgeons, and Dr. Boyer as resident physician. We are indebted to the politeness of the latter gentleman for the following interesting report:

Dr. Fenner—*Dear Sir*:—At your request I send you the number of admissions and deaths of yellow fever, in the Maison de Sante, during the epidemic of 1853. Very respectfully,
P. C. Boyer, *Resident Physician.*

At the Maison de Sante, the first case of yellow fever was admitted on the 13th of July; from that time until the disappearance of the epidemic, the admissions of yellow fever amounted to 338; the deaths during the same time, 97. Among the number discharged cured there were fifteen cases of black vomit.

Six of the Sisters of Charity connected with this institution were unacclimated; three of the number recovered from yellow fever, the others passed through the epidemic without being attacked.*

Maison de Sante, N.O., Nov. 11, [illegible]53.

THE TOURO INFIRMARY.

This is a new hospital, which has been established within the last year or two, by the munificence of the venerable Mr. Touro, one of our oldest citizens, and one who has used his immense wealth more for the improvement of the city than perhaps any one who has ever lived here. The infirmary which has the honor of bearing his name is under the exclusive control of Dr. J. Bensadon, who has politely furnished me the following report on yellow fever:

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*There were seven sisters in the house. Those attacked had been the longest in the ci though not over three years. Two of those who escaped had come from the North in March la

Yellow fever cases from July 1st to November 1st:

	Admitted.	Discharged.	Died.
Males	**362**	**218**	**144**
Females	**161**	**92**	**69**
Totals	**523**	**310**	**213**

Three recovered from black vomit, 13 from hiccup and hæmorrhage; 109 died with black vomit.

Of the 213 deaths, 26 died within 10 hours after their admission; 38 within 24; and 24 within 48.

A large number of the yellow fever cases in this infirmary were sent there by the Howard Association and the Hebrew Benevolent Society. Under all the circumstances, I consider the success of Dr. Bensadon in the late epidemic highly creditable. The infirmary is situated on old Levee street, just above St. Mary's Market.

CITY WORKHOUSE AND HOUSES OF REFUGE.

We are indebted to Dr. John F. Thorp, the attending physician, for the following reports of the first ten cases of yellow fever that occurred in each of these institutions.

CITY WORKHOUSE,

Situated on Hevia street, in the back part of the city, parallel with the Charity Hospital. The inmates are chiefly males, condemned to work for short periods as punishment. Dr. Thorp gives the date of admission into the workhouse, the date of attack, and the results.

	Admitted.	Attacked.	Result.
Case 1	**June 9th.**	**June 29th.**	**Cured.**
“ 2	**Unknown.**	**July 2d.**	**“**
“ 3	**May 10th.**	**“ 2d.**	**“**
“ 4	**June 18th.**	**“ 2d.**	**“**
“ 5	**Unknown.**	**“ 2d.**	**“**
“ 6	**July 11th.**	**“ 12th.**	**“**
“ 7	**June 18th.**	**“ 13th.**	**“**
“ 8	**July 14th.**	**“ 15th.**	**Died.**
“ 9	**June 9th.**	**“ 18th.**	**“**
“ 10	**July 2d.**	**“ 14th.**	**Cured.**

Total number of cases treated in this place, 89, Deaths, 14.

BOYS' HOUSE OF REFUGE.

This institution adjoins the City Workhouse. The first case of yellow fever that occurred here was on the 22d of June, in a boy who had been in the house one year. The next five cases had also been confined there one year. There were twenty-one cases in all, of which six died.

GIRLS' HOUSE OF REFUGE,

Situated on Apollo street, near Triton walk.

The first two cases occurred on the 1st of July. There were twenty-one cases in all, of which only one died, and she a matron who had been in the house for several months. Dr. Thorp appends the following remarks on the cases in this institution:

> These persons had all been in the Refuge for some months, and from this fact I believe the disease originated there; or rather, that their isolated condition did not protect them from the general cause, or epidemic influence, prevailing at the time. Both Houses of Refuge were in bad condition as to cleanliness.

CITY PRISON, PARISH JAIL AND LUNATIC ASYLUM, AND BOYS' HOUSE OF REFUGE.

Dr. E. Sabatier is the city physician for the Second and Third Districts, and has charge of all these establishments. On account of recent bad health, Dr. S. cannot at this time furnish a full and minute account of the yellow fever at these places, but has kindly given me a few notes, which I deem worthy of insertion. There was more yellow fever in the City Jail and Parish Prison this year than ever before.

The first case occurred about the last of July, in a man who had been in the prison about three months, and had been treated for intermittent fever about two months previously. At the time above stated, he was taken out to court for trial, or something of the kind. Whilst there he was attacked with yellow fever, and taken back to the prison. His attack proved a severe one, attended with hæmorrhage and yellowness, but he finally recovered.

About a week afterwards another case occurred, in a man who had not nursed, or been about the first case. From this time cases continued to multiply, till they reached the number of thirty, of which five died. There were about three hundred prisoners in the jail at this time, and there was free intercommunication amongst them; in fact, they were kept together within very narrow limits. There were two rooms set apart for the hospital, in one of which the yellow fever patients were kept by themselves. Before this was done, however, several were attacked with yellow fever, who had been placed in hospital for other complaints. If the disease were really infectious, it appears stran that only thirty out of three hundred should have taken it under circumstances so favorable.

The Lunatic Asylum is a department of the Parish Prison, and is used chiefly as a temporary resort for lunatics previous to their being sent up to the State Asylum at Jackson. There were from thirty to forty inmates during the summer, much crowded; no separate apartment for the sick. There were nine cases of yellow fever amongst them, and no death. The first two cases occurred on the same day (August 6th), in persons who had been in only a few days. The next case occurred on the 10th of August in a man who nursed the first two. There was then a lapse of nineteen days before another case occurred. He had been in the Asylum ever since the 8th of January previous. The last case occurred on the 1st of October.

Most of the cases occurred in those who waited upon the sick, but they were all in such close quarters that there could not be much difference in the amount of intercourse.

The Boys' House of Refuge of the Third District is situated on the Gentilly road, quite in the country, about three miles from the city prison.

Dr. Sabatier says there was a good deal of yellow fever among the inhabitants around the Asylum, but only one case occurred in the Refuge.

PRIVATE INFIRMARIES OF THE BOARD OF HEALTH.

The Board of Health established four temporary hospitals during the worst of the epidemic, one in each district of the city. I have before me reports of two of them, viz: No. 1 and No. 4, which furnish the following statistics:

No. 1................received 343 cases, and lost 155.
No. 4................received 432 cases, and lost 207.

I have not been able to collect any information from the other hospitals and asylums in the city.

HOWARD ASSOCIATION.

This far-famed benevolent Association consists of but thirty members, is a chartered institution, and has been in existence ever since the year 1837. The following statistics are taken from Dr. Bennet Dowler's "*Tableau of the Yellow Fever of* 1853," published in Cohen's New Orleans Directory for 1854."

"According to the report of the Howard Association, published late in December, the Society had under its care, during the epidemic of 1853, no less than 11,088 yellow fever patients—5,203 males, 5,885 females; of whom 2,942 died, and 8,146 were cured. Expenditure, $159,190 32. Average for each patient about fourteen and one-third dollars. Of this number (5,845) much more than half were Irish; German (2,890,) nearly a quarter; French, 436; United States (716), less than one in sixteen of the whole. Hence, it appears that Ireland and Germany give 8,735; other countries, 2,353.

"The Association, during the epidemic, received from all parts of the Republic, the sum of $228,927 46, and expended $159,190 32; leaving a large surplus to be put out at interest for this charity. * * * * The predominance of female patients in the above enumeration is remarkable, inasmuch as that sex is least susceptible to the yellow fever, and contributes to the mortality of this disease in a ratio greatly inferior to males. The most probable explanation is this: females preferred the Howard Hospitals to the Charity Hospital and others established by the Board of Health."

Its benevolent aid was extended to about twenty places in Louisiana, Mississippi, and Texas. About forty physicians enrolled their names, subject to call, soon after the Association offered its benevolent services to the indigent sick. Three of these physicians fell victims to the epidemic, viz: Dr. Jacobson, late of St. Louis, Dr. Friend, late of Alabama, but originally of Petersburg, Va., and Dr. Lucien Hensley, late of Frankfort, Ky., all most worthy and intelligent gentlemen. Peace to their manes! They fell in the holy cause of suffering humanity, and perhaps will have no more durable monument to their memories than this brief notice of their untimely fate. Dr. Friend was a widower, of middle age, who had very recently settled amongst us, and has left a family of orphans, who, I hope and trust, may never suffer for want of that benevolence which he so liberally displayed while living.*

MORTALITY OF THE EPIDEMIC.

Under this head I shall endeavor to give the number of deaths from yellow fever, and the per centage of mortality to the number of cases, and to the population of the city. I regret that these statistics are not as precise and correct as is desirable; but they are the best we have, and I do not think they are far from the truth. The figures heretofore given were taken from the weekly and daily reports from the cemeteries as published in the newspapers of the city, and doubtless contain some errors. Since the close of the year, the Sanitary Commission have employed Dr. D. Macgibbon, a competent person, to examine the reports from all the cemeteries, and prepare a mortuary table, giving the statistics of disease, age, sex, nativity, etc. I find some discrepancies between this table and the weekly reports; but they are not very important. For instance, the difference in the aggregates of certified deaths from yellow fever is only 54; Dr. Macgibbon making it 7,849, and the papers making 7,902. It is presumable that Dr. Macgibbon's table is most correct; and as it receives the sanction of the Sanitary Commission, I shall adopt it for my future calculations.

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*It is not without deep regret that I notice in the Report of this Association, an omission to do justice to the medical profession. Nearly all their patients were attended by the physicians who had enlisted in their service; and yet the only allusion to them is in the statement that out of their overflowing treasury they paid them a small sum of money. Not even a passing tribute is paid to those noble fellows who died in the service.

This table shows the total mortality from all causes for the year, to be 15,633; of which, the cause of death is not stated in 1,150.

The deaths from all fevers amount to 8,518; of which, from

Yellow Fever	7,849
Malignant Fever	34
Pernicious "	152
Congestive "	77
Remittent "	29
Intermittent "	38
Bilious "	21
Typhus "	103
Typhoid "	146
Other "	69
	8,518

Of this immense number of deaths from fevers, only 142 occurred previous to the month of May.

In regard to sex, in yellow fever, males, white	5,292
Males, colored	17
	5,309
Females, white	2,475
" colored	21
	2,496
Sex not stated	44
	7,849

AGE.

1 month and under	7
1 year and under	90

5 years and under	196
10 years and under	197
20 years and under	1,598
30 years and under	3,310
40 years and under	1,238
50 years and under	436
60 years and under	180
70 years and under	54
80 years and under	15
90 years and under	3
100 years and under	00

PLACE OF NATIVITY.

Not stated, 524; New Orleans, 87; Louisiana, 28; North Carolina, Virginia and Kentucky, 54; North Western States, 63; Northern States, 112; British America, 7; Great Britain, 131; Ireland, 1,842; Germany, 1,209; France, 271; Holland and Belgium, 48; Austria, Poland and Denmark, 84; Norway and Sweden, 7; Spain and Italy, 46; West Indies and South America, 4; Unknown nativity, 3,855.

These statistics are very remarkable, and somewhat different from the ordinary results of yellow fever. In regard to sex, the proportian of deaths among females is larger than usual. I know of no special cause for this.

In respect to age, the greatest number of deaths, as usual, occurred among those who were in the very prime and vigor of life, i. e., between the ages of 20 and 40 years. Largely over half the deaths from yellow fever (4,908) occurred at this period of life. The proportion of deaths among the very young and very old was unusually great.

In respect to place of nativity, 344 were born in the United States, and 3,649 in foreign countries. The number is very large in which the nativity is "not stated" and "unknown." Ireland, Germany, and France, furnished a majority of the cases from foreign countries (3,322.)

The number of deaths among natives of New Orleans (87) and of Louisiana (28) is unusually great.

We have just been speaking of deaths from yellow fever that were certified by physicians and others duly authorized. The reports from the cemeteries give upwards of 700 cases during the epidemic period in which the disease is "not stated." We have seen that the editors of the city papers estimated six-sevenths of these as belonging properly to the yellow fever list, and have added them accordingly. On comparing notes with a number of physicians, I am induced to think this estimate too large, and that about one-third, or 225 would be nearer the truth. This. added to the 7,849, would give 8,074 as the most probable grand total of deaths from yellow fever in the city of New Orlea

Assuming this to be correct, and having ascertained some fixed data in regard to the number of cases and deaths in various institutions of the city, we may now proceed with an approximative calculation of the number of cases of yellow fever that occurred in the city, and also the rate of mortality for the whole.

The following data may be considered as fixed:

Treated at	Cases.	Deaths.	Loss per cent.
Charity Hospital	3,217	1,890	58.75
Howard Association	11,088	2,942	26.53
Maison de Sante	338	97	28.70
Luzenberg Hospital	150	79	52.66
City Workhouse, 1st District	89	14	15.73
Boys' House of Refuge	21	6	28.52
Girls' House of Refuge	21	1	4.76
City Prison	30	5	16.65
Lunatic Asylum	9	0	0.00
Circus Street Infirmary	300	100	33.33
	15,263	5,054	33.11

We thus have 15,263, with a loss of 5,054, which is at an average rate of 33.11 per cent. As these cases occurred chiefly in the charitable institutions, the rate of mortality will surely be considered very moderate. I have here omitted the cases treated in the Touro Infirmary and the temporary hospital of the Board of Health, because, on inquiry, I find the most of them are included in the report of the Howard Association.

If we now deduct these ascertained deaths (5,054) from the total deaths by yellow fever (8,074), there will remain 3,020 deaths to have occurred in other infirmaries, asylums and private practice. If we allow 300 deaths to the infirmaries and asylums not stated, and the same proportion of cases to deaths as in the institutions above given, we shall have the number of cases raised to 16,163, and the number of deaths for private practice reduced to 2,720. Now if we allow five cases to each of these deaths, or a loss of 20 per cent., it will give 13,600 cases, which, added to the above stated, makes 29,763 as the probable grand total of yellow fever cases that occurred in the city during this epidemic.

Now, estimating the population of the city that remained during the epidemic at 100,000, it would appear that 29.76 per cent., or about 1 in 3.4 were attacked, and about 8 per cent., or 1 in 12.5 died.

Estimating the population at 120,000, the number attacked was 24.80 per cent., or about 1 in 4, and the mortality about 6 per cent., or 1 in 16.

Dr. B. Dowler says in his tableau, before quoted: "The population of New Orleans when the epidemic broke out is estimated at 150,000, or 4,541 more than that of the city census of the year 1852, which gave a total of 145,483. It is probable that 30,000 people left the city, whereby the population remaining was reduced to 120,000, including 30 or 40,000 who had never passed through an epidemic, and perhaps many thousands that have passed untouched through the epidemic of 1847, some of whom suffered in 1853; on enumeration, however, merely proximate, without any certain basis."

Dr. D. shows, by statistics made out from the weekly reports of the cemeteries, that "the epidemic caused but a slight oscillation among other maladies while its pestilential waves rolled over the devoted city."

The great epidemic of 1847 caused only about 3,000 deaths in this city and Lafayette, which were then separate, but are now united.

If it should be thought by any one that the estimate here given of the ratio of cases and deaths to population is too far below that of other places where this epidemic prevailed, let it be remembered that there was a much larger proportion of acclimated persons in New Orleans than in those towns where yellow fever does not ordinarily prevail, and the estimate will not then appear so unreasonable.

Let us now review some of the most prominent facts presented in the foregoing history of the epidemic, in the city of New Orleans.

1. We have shown that when this pestilence broke out, the condition of the city, in respect to cleanliness, was so bad as to be an object of public notoriety.

2. We have shown that yellow fever appeared in the city much earlier than usual, and that the first cases occurred in persons who had been here a very short time. These were unacclimated persons, who had just arrived in vessels direct from New York, Liverpool, and Bremen, without stopping at any place where yellow fever was prevailing.

3. That no vessel arriving here from any infected port, either in the West Indies or South America, brought any cases of yellow fever, or had any on them after getting here, previous to those which must have originated in the city.

4. That within a very few days after the occurrence of the first cases, others were seen in different and remote places, and that no connection or intercommunication could be traced by the most careful investigation.

5. That the disease was the same that prevails here, to a greater or less extent, every year, differing only in its malignancy.

6. That all the varieties of endemic fever which prevail throughout the Southern country, were seen here in the midst of the epi-

demic, and they interchanged type just as is observed among the fevers of the country.

From all these facts I am led to the conclusion, that the disease we have been considering, originated from local causes, in conjunction with an extraordinary constitution or condition of the atmosphere existing at the time.

THE CAUSE, PATHOLOGY AND TREATMENT OF YELLOW FEVER.

The unexpected length to which this report has already been drawn, together with the fact that I am at this moment busily engaged noting the rise and progress of another epidemic which has broken out at New Orleans, preclude the possibility of my entering upon a full consideration of the above important topics on the present occasion. In short, I can give them but a passing notice, hoping to discuss them more fully on a future occasion.

I have already expressed the belief that yellow fever originates from the combined influences of decomposing animal and vegetable matters, and a peculiar, unknown constitution of the atmosphere; but I confess this is only a conjecture, and shall not attempt now to give the grounds of my belief in it. So far as I have been able to ascertain, the true and real cause of this disease is as yet unknown. Whatever it may be, however, long and careful observation of its effects has led me to the conclusion that it is most probably *a subtle material poison*, that floats in the atmosphere, and enters the human system by respiration; first, getting into the current of the circulation, and thereby carried to all parts of the body. This, too, is but a theory, that cannot be demonstrated by positive proof, yet it may be strongly supported by the analogous effects of certain known poisons upon the system. It appears to me that the phenomena observed in an attack of fever, bear a strong resemblance to a conflict between the vital powers and certain poisons which we have known to be introduced into the system; that in some instances these powers are capable, unaided, of resisting or overcoming the poison,—of doing so in many cases with the aid of medical skill; but in others they are totally unequal to the task, with whatever aid they may receive; and that in such, death must be the inevitable result.

I have known yellow fever to run through all its stages and terminate in recovery, without medical aid. I have, more frequently, seen cases thus unaided terminate in death. Such cases as these are valuable to the medical observer, as showing the natural history or course of the disease. I have seen many cases cut short and cured in the first stage of the disease, thus making an abortion of its natural course. On the other hand, I have seen attempts to produce this result fail, and the effects sometimes prejudicial.

I have seen a great many cases of yellow fever conducted to a favorable termination by medical skill, which I confidently believe would have died without such aid. On the other hand, I think I have seen cases that were injured instead of being benefitted by the treatment pursued.

I have known cases which appeared to be doomed victims from the moment of attack, and which I believe could not have been saved by any remedial means now known.

In addition to these observations, I may say I have seen persons whose systems were capable of resisting the morbific cause, and never experiencing its deleterious effects, although fully exposed to it, and witnessing the deaths of thousands around them. Some escape through violent epidemics, such as the last in this city, and are attacked subsequently, when but little of the disease is prevailing; several instances of which I have recently witnessed.

Our theory being, then, that yellow fever consists in a series of morbid phenomena and lesions, produced by an aerial poison that finds its way into the human system, the sum total of these phenomena must constitute the pathology of this disease. The symptomatology of yellow fever has been most accurately given by many acute observers. The same may be said respecting the post mortem appearances of all parts of the body excepting the blood. So far as I know, the changes that take place in this fluid, from the beginning to the end of the disease, have not yet been satisfactorily demonstrated; but the chemist and microscopist are engaged in the work, and we may hope for important results from their labors in the course of time. I am not aware that examinations of the dead body have thrown much light upon the true pathology of yellow fever, or afforded as much assistance in the selection of the most beneficial remedies.

Treatment.—In regard to the treatment of yellow fever, the grand object and aim of all our investigation, I am quite at a loss as to what I should say. Almost every imaginable plan of treatment was pursued in the late epidemic, from the mildest to the most heroic, and with results as various as the plans. It would be impossible for me to describe all the different plans pursued, and I must therefore confine myself to a few general remarks upon this topic.

Some cases were known to recover without any medical aid whatever. Many physicians say they succeeded best with a comparatively mild or gentle course of treatment, taking the range of all the most approved remedies in this disease, but using them in moderate doses, and according to the indications apparent in the natural course of the disease; whilst others, again, boldly undertook to cut short and cure the fever by the prompt use of powerful remedies. From 1847 to 1853, I succeeded in doing this myself, as did several other physicians in New Orleans, in a very satisfactory manner, by large doses of the sulph. quiniæ and opium at the onset, followed by moderate doses of calomel or blue mass. These were the chief remedies relied on, though others of less force were used as adjuvants. In my published accounts of this practice, I admitted that the type of yellow fever thus so readily mastered was mild, and that it remained to be seen whether it would succeed equally well in a more malignant type of the disease. Candor requires me now to state that this abortive practice did not answer my expectations in the late epidemic, and that after giving it a fair trial I abandoned it, and fell upon a milder course of treatment, which proved more satisfactory. I finally dropped the sulphate of quiniæ altogether, and resorted to the ferro-cyanuret, combined with blue mass and, sometimes morphia. Experience has taught me that quiniæ is most beneficial in the first stage, and that it should rarely be ventured on even so late as the end of the second day. I do not recollect ever to have seen good effects from it when given in large doses after the second day; but often the contrary. I believe that quinine operates in two ways: first, as a *specific antidote* to the fever poison; and secondly, as a powerful *depurator of the blood*, by the copious perspiration it induces. Now, if this view be correct, it may readily be conceived why this remedy should produce its happiest effects in the first stage of the disease, as it is then that the supposed poison is floating in the current of the circulation,—then the perturbation of the system is chiefly, if not entirely, functional, and has not continued long enough to cause organic lesion of any important part. That quinine, when administered by the mouth, the rectum, on blistered surfaces, and even by inhalation through the lungs, does readily find its way into the blood, and is eliminated in the urinary secretion, has been completely demonstrated, and must be admitted as a fact. In regard to the perceptible effects of quinine on the human system, we see none that may not be equally or even more powerfully produced by other remedies; yet none of these medicines display such decided curative power in the treatment of fevers as quinine; hence we are led to the inference, that quinine must possess specific virtues in these affections. Dr. Boling, of Alabama, and others, have asserted that quinine is highly beneficial in pneumonia and some other inflammatory diseases occurring in miasmatic districts; and so have I; but I have not observed like good effects from this remedy in the inflammations that commonly supervene in the course of idiopathic fevers, such as *cerebritis*, *gastritis*, *gastro-duodenitis*, etc. When these organic lesions set in, they require special attention. I know of no remedy but cinchona that possesses specific virtue in the cure of our Southern endemic fevers. We may bleed, sweat, puke, purge, stimulate, depress, heat, cool, and vesicate; and, doubtless, the judicious application of such means often affords very great assistance to the constitution in its struggles against the deadly assaults of these fevers; but that is all they can do. But we find in cinchona a remedy, which, if introduced into the system early enough and in sufficient quantity, possesses the power of curing these diseases in a great many instances, without any other aid whatever.

So early as the year 1800, two distinguished Spanish physicians, Drs. Lafuente and Bobadilla, (the former consulting physician to the royal armies), discovered and published to the world, that the malignant yellow fever prevailing in Spain at that day could be completely cut short and cured by from six to eight ounces of Peruvian bark, taken within the first forty-eight hours from the attack. Their dose was two or three drachms repeated every two hours, commencing immediately after the chill. At first, they gave a gentle emetic to "clean the stomach;" but this practice was abandoned, because it often left the stomach so irritable that it could not retain the bark. They then gave some cream of tartar with the first doses, for the purpose of opening the bowels; but this was afterwards found useless; and, finally, the bark was relied on alone, and the success was extraordinary.

"Of ninety-seven persons who were attacked with this fever in the village of Barreos, and who took these six or eight ounces of bark within forty-eight hours of the attack, commencing from the first to the eighth hour, all quelled the disorder in its origin, one excepted, who perished, having at the same time an attack of the gout. Of eight who took the same quantity, commencing from the eighth to the tenth hour, all were cured. Of five who began to take it from the tenth to the twenty-fourth hour, three recovered and two died. Of seventeen, who began the third and fourth days, eight recovered and nine died; and, finally, of eighty-nine, who were treated as they chose, but in a different manner (including the sudorific plan,) only twenty recovered."*

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* New Orleans Med. and Surg. Journ., vol. iv. p. 248. Extract from Philadelphia Medical and Physical Journal for 1808.

This would appear to show, not only the wonderful powers of cinchona in the cure of yellow fever, but also, that the physicians of the present day were anticipated by a long period in their practice of curing yellow fever with the alkaloids derived from that article. But I must hasten to a close.

I do not maintain that quinine is the only remedy that is beneficial in yellow fever, or that what is called "the quinine treatment" is the only method that can be relied on; on the contrary, I have not the least doubt but that the skillful use of other remedies, together with careful nursing, may enable nature to overcome the disease in a great majority of cases, without the use of a single particle of quinine. A few years ago, the late Dr. Luzenberg, and several of our French physicians, treated yellow fever quite successfully, almost with the lancet alone. Some of our physicians who were formerly much prejudiced against quinine in yellow fever, now prescribe it freely; whilst others, who once considered it almost a sovereign remedy in this disease, now prescribe it very cautiously. That this invaluable medicine was often injudiciously prescribed, and sometimes produced injurious effects in the late epidemic, cannot be denied; but this is not sufficient cause for condeming it entirely. On such grounds, every potent remedy in the materia medica would be ostracised at once.

Let us now endeavor to lay down something like the principles of practice in yellow fever. Before this can be done, we must have definite and correct ideas of the nature or pathology of the disease, of its natural course from the beginning to the close of an attack, and of the manner in which it terminates, whether it be in convalescene or death. The changes produced in the organism by the morbific cause, may be discovered by examination after death. In these examinations, however, we see only the results of morbid action; and, as before stated, I am not aware. that these discoveries have thrown much light either upon the *modus operandi* of the morbific cause, or the best method of counteracting its baneful effects.

We are called to a patient, I will say within two or three hours after he is attacked, and are told that he was taken with a chill, accompanied by headache and pain in the back and limbs; and that on going to bed, and covering up warmly, this condition was soon followed by the symptoms now before us. We find him with violent pains in the head and back; his skin is burning; countenance flushed and swollen; eyes red; pulse frequent, full and bounding; thirst intense; stomach uneasy; sometimes nausea and vomiting, restlessness, &c. We recognize this as the first stage of yellow fever; and we know from experience that it will shortly be followed by a second and third stage, presenting symptoms quite different from these, but governed, in a great measure by the manner in which this stage is treated. Now, what are the indications pointed out by the foregoing symptoms, and upon what principle shall we endeavor to fulfill them? It is evident that the symptoms plainly indicate super-excitement of the whole system, and the principle to be acted on is to restore the equilibrium of the circulation and the excitement. The over-heated skin must be cooled; the accelerated pulse must be retarded; the distressing pains, thirst, and restlessness, must be relieved. These desirable results may doubtless be effected by different means; but that is the best method which accomplishes the object most promptly, effectually and safely. The favorite practice of some physicians is to endeavor to cut short the disease at this stage, and thus prevent the subsequent stages entirely. Others think this hazardous, and are satisfied with affording relief to distressing symptoms, and safely conducting the patient through all the natural stages of the disease. We will suppose the latter plan pursued in the case before us, and that by means of free cupping, ice to the head, the hot mustard foot-bath, and a dose of castor-oil, or some other cathartic (the remedies usually resorted to), the patient has obtained much relief in every particular; but still the fever marches on its regular course, and we now have him in the second stage.

The period is the close of the second and beginning of the third day. The patient, if doing well, is sweating freely, has but little pain, pulse soft and not above 100 to the minute, thirst may be considerable but not distressing, bowels open, urine free, sleeps quietly, and relishes light food. All that is necessary now, is to let him rest quietly and free from all mental excitement, to keep up a gentle perspiration with a tablespoonful of the neutral mixture, or the *liquor ammoniæ acetatis* every hour or two; and to let him drink weak lemonade, barley-water, and small quantities of thin chicken-water. If he is not doing well, the skin has a constant tendency to get dry and hot, the pains in the head and back continue, he is restless and uneasy, pulse upwards of 100, thirst for cold drinks distressing, the stomach and bowels flatulent secretions scanty. The indications now are, to reduce the super-excitement of the system, especially the organs most affected; and to increase the action of the principal emunctories—the skin, liver and kidneys. The principle on which we proceed is depletion, in some form. The approved remedies in this state are we cups or leeches to the distressed organs, mercurials, diaphoretic mixtures, baths, spongings, the wet-sheet, etc.; but if they produce the desired effect, it will be mainly on the principle of depletion, either by the direct abstraction of blood, or by the establishment of copious secretions. A moderate spontaneous hæmorrhage from the nose, gums, or uterus, is often followed by the happiest effects at this stage of the disease. We may now venture to give a prognosis of the case, which will be favorable or otherwise, according as we have succeeded in combating the foregoing unfavorable symptoms.

We now approach the third or critical stage of the fever; the period being generally the end of the third day, or later. If the patient is safe, you may find him extremely weak, but calm, quiet, and disposed to sleep; his pulse slow and soft, skin cool and moist; no pain, little or no thirst, free secretion of urine, and a desire for nourishment. He may now be allowed small quantities of chicken-water, beef-tea, thin arrow-root, or other light food. If he have no appetite, he may take a little ale, porter, or weak brandy and water. The utmost caution should be observed to avoid physical or mental exertion, until the powers of the system have had time to recuperate.

If the crisis is not complete and favorable, the patient will be restless and reckless, somewhat delirious, eyes injected and dull, skin dry and beginning to turn yellow, capillary circulation sluggish, gums and lips engorged, tongue red and dry, urinary secretion very scanty; he is either despondent or indifferent as to the result of his case; his stomach is uneasy, with acid eructations and not the least appetite; there may be slight nausea, with occasional vomiting of the fluids drunk; the ejecta are acid, of a whitish color, with a few flocculi like the wings of insects floating in a mucilaginous fluid; there is also heat and burning in the stomach.

Nature now points to spontaneous hæmorrhage as the means of bringing about a favorable crisis; but, unfortunately, that is likewise too often the avenue to death. If a gentle hæmorrhage now sets in from the nose, gums, or uterus, we often see the happiest effects soon follow; yet either of these hæmorrhages may prove uncontrollable and prove fatal. If the hæmorrhage appears from the stomach, it is black vomit, the most dangerous of all. The effect of the first free discharge of black vomit is decidedly soothing, and marked relief is experienced of the distressing stomach symptoms. This doubtless proceeds from the disgorgement of the congested organ. If the effusion of blood into the stomach be very slow and in moderate quantity, the same relief does not follow; and after death the mucus membrane is found of a livid hue. The effusion may be so rapid that pure, unchanged blood is thrown up. If the patient has been freely depleted in the early stages by blood-letting, purging, and sweating, the crisis is not so apt to be marked by hæmorrhage; yet I have seen a man die with copious black vomit, who had lost near a hundred ounces of blood by venesection and cups.

We should never lose sight of the important fact that yellow fever has a natural tendency to crisis by hæmorrhage. This is proved by the general observation that when the disease runs its course uninterrupted by medical treatment, it will terminate in this manner in a great majority of cases. By judicious treatment fever may be brought to a crisis in a different way, as by free secretions from the skin, liver and kidneys; and this is one of the main objects of the practitioner; but how often does he welcome the appearance of a gentle hæmorrhage from some safe part, when his remedies seemed likely to fail in producing the desired effect! When the fever is cut short and cured by quinine or the lancet, neither hæmorrhage nor jaundice are apt to appear; hence, we may infer that these symptoms proceed from alterations of the blood produced by the continued action of the morbific cause. What these changes are, as before stated, remains to be discovered.

Let us return now to the indications in the unfavorable state of affairs at the third stage of the disease. They are to keep the patient as quiet as possible, to allay the irritability of the stomach, and correct acidity by soothing alkaline mixtures, and to restore the action of the skin by repeated frictions of warm vinegar, or spirits and water. If there be considerable determination to the brain and stomach, with deep redness of the face, lips, and gums, we may be sure the patient will not recover without hæmorrhage; but if we venture to draw blood, it must be by a method as much like a gentle spontaneous hæmorrhage as possible. In this condition, the application of a few leeches to the head, epigastrium, anus, or internal malleoli, is sometimes followed by the happiest effects. Our principle of action in this stage is, to husband carefully the remaining vital forces, to see the secretions are going on, and to follow closely the directions of nature. The disease now comes to a crisis, and the patient either convalesces or dies. Either of these processes may prove tardy and dubious; but I cannot pursue them farther. At this stage of the disease there is sometimes observed a deceitful calm, that is well calc lated to disappoint the flattering hopes of the inexperienc

After three days or more of excitement, pain, and torturing restlessness, the patient becomes quiet and easy, his skin is of the normal temperature, the tongue moist and clean, and the mind clear and undisturbed by apprehension of danger. There is really but one symptom that indicates the impending danger, and that is the total suppression of the renal secretion. It will be found on inquiry that no urine has been passed for twelve hours, and there is none in the bladder. This single symptom is sufficient to excite fearful forebodings, though everything else appear favorable. The urinary secretion must be restored, or the patient will not recover. Special attention should now be directed to this indication; but, unfortunately, not much can be done in the existing state of the patient. Fomentations, stimulating frictions with turpentine, and diuretic injections, may be resorted to; but we should be extremely cautious how we disturb the stomach with medicines. The stage of convalescence is worthy of a passing remark. The crisis of this disease is followed by a great prostration, yet the convalescence is generally rapid, provided all imprudence in diet and exercise be avoided. It is astonishing how slight an imprudence in either of these, may produce serious consequences. The mere sitting up a minute or two, taking a mouthful of solid food too soon, or eating three spoonfuls too much of soup, has been known to cause a fatal relapse.

Our principle in this stage is to avoid imprudence of every kind, and allow nature the fairest chance to recuperate her prostrated powers. Good London porter and ale are the best tonics.

Such is a rude attempt to lay down the principles of practice, in yellow fever. It will be seen that they are based in a great measure upon theory, but that is unavoidable in the present state of our knowledge. We are necessarily compelled to theorize upon matters that are not visible and demonstrable. Every physician has his theories, however rude or reasonable: and his are best that lead to the most successful practice.

I have said that in the late terrible epidemic, I first practiced the abortive method by large doses of quinine, which did not succeed to my satisfaction; and that I soon fell upon a milder plan. The following are the results:

I treated in private practice, one hundred and thirty-seven cases of well-marked yellow fever, exclusive of cases to which I was called in consultation. Of these, nineteen died, and I signed the certificates of death. Nine of these deaths occurred in cases to which I was called at or beyond the second day from the attack, and several of them were at the close of the third day, when the patient was on the verge of black vomit. They were too far advanced to expect much from medical treatment, and therefore I do not consider myself chargeable with the results. The other ten deaths occurred in cases that I had a fair chance to treat, and should have cured if I had known how to do it. The rate of mortality, then, for the whole number of cases, was 13.86 per cent. or about one in seven. Deducting the nine deaths that occurred in the patients who were beyond the proper stage for treatment when it was commenced, we have, then, one hundred and twenty-seven cases, and ten deaths; which is at the rate of 7.87 per cent. or one death to not quite thirteen cases.

This is a conscientious statement of facts; and if any one had better success in the late epidemic, I can only say I am glad of it.

I here close this long and tedious report, and crave the indulgence of the Association in behalf of its numerous defects.

NEW ORLEANS, LA., *August 30th*, 1854.

* * *

Yellow Fever at Galveston.

OCTOBER 1st., 1867.

We have suffered greatly during the past month, but the fever is on the decline, and we hope before the close of another week, to see the disease cease to be epidemic, but only for the want of material, as no one believes that the city will be safe for unprotected persons before we have a freeze. The disease is now amongst the returned citizens and the shipping in the harbor. The type of the disease remains the same, and about as many deaths occur in proportion of those taken, as formerly.

Of the physicians sick at the time of our last issue, Doctors W. H. Gantt, R. H. Hanna, Assistant Surgeon C. R. Rowe and Assistant Surgeon Samuel Adams, died; and of those taken sick during the month, Dr. E. S. Alexander died. Drs. S. M. Welsh, Ernest Brake, F. E. Daniel, S. A. Towsey, —— Tompkins and Asst. Sur. Conkrite and Moran have recovered. So we have had thus far twenty-six physicians down and of this number twelve have died. We intend as soon as we can obtain their obituary, to publish them in our Journal, The fever has spread into the interior all along the lines of the railroads, and from the little villages into the country as high up even as Austin and Huntsville. It is about its worst at Houston, and will soon begin to decline there, as it has done here.

We publish in this number Dr. Fenner's treatment of yellow fever, for the benefit of our country subscribers, as we are frequently written to for the latest and best treatment. We gave in our last, ours, and now Dr. Fenner's, and we have not learned any thing since, except that a solution of perchloride of iron has been used with success, by the physicians of Houston in stopping black vomit and even in preventing it and hæmorrhages. We tried it but it burnt the mouth so much that we discontinued it; perhaps our solution was too strong, and we intend trying it again. We used muriate tincture of iron, but with little success, preferring tannin as it did not irritate and could be given *ad libitum*.

We still beg of all our physicians to keep notes of their cases, and furnish us with everything they may think of interest in making up a complete history of the disease in this State. We do not intend to publish any more articles on yellow fever until next summer, but we wish every physician would write out his personal experience at once and we will classify and arrange the facts and give due credit to the author.

Galveston Medical College.

The regular course is put off until the 1st of December instead of November, as heretofore published, as it would not be safe for unprotected persons to visit Galveston before that time.

By the death of Prof. Gantt the Chair of Surgery is made vacant, but will be filled before the session begins, and also that of Demonstrator made vacant by the death of Dr. R. H. Hanna.

The College has sustained a great loss in these gentlemen, as they were both popular and able teachers.

The other Professors will all be in their places and will endeavor to make up for our losses.

We have some students now in the city who have had the fever, but we would warn all others from coming into the yellow fever district until frost, unless they have had the fever, as no one is exempt who has not had an attack, but to all who come, clinical instruction and private lectures will be given at the Hospital, until the regular lectures commence.

Mr. Hoff and the New York Academy of Medicine.

At the last meeting of the Academy of Medicine, the follow-resolutions were unanimously adopted:

Whereas, W. L. Hoff, proprietor or agent of the "Hoff Malt Extract," is issuing publications through the secular papers, and by means of pamphlets and circulars, professing to quote favorable opinions expressed in a report of a committee of the Academy; and, whereas, the said Hoff is widely circulating a letter purporting to have been written by a Fellow of this Academy; and, whereas, the publications of said Hoff are so adroitly and designedly worded as to impress the mind of the reader with the belief that the Academy has endorsed his nostrum, and has thus apparently compromised its dignity and professional standing; therefore,

Resolved, That the New York Academy of Medicine does hereby proclaim and declare that it has not expressed any opinion in regard to "Hoff's Malt Extract," and that any and every use of its name in recommending said Extract is unauthorized by the Academy.

Resolved, That a copy of the above preamble and resolutions be sent to the medical journals of this city, and that the medical journals throughout the country be requested to publish the same. in justice to the Academy and the profession.—*New York Me Journal.*

Books, Pamphlets and Journals Received.

JOURNALS REGULARLY RECEIVED:

American Journal of Dental Science, Baltimore; September.
American Naturalist, Salem, Mass.; September.
Atlanta Medical and Surgical Journal; September.
Boston Medical and Surgical Journal; September.
Buffalo Medical and Surgical Journal; September.
Braithwaite's Retrospect; September.
Detroit Review.
Medical and Surgical Reporter, Philadelphia; September.
Medical News and Library; September.
New York Medical Journal; Vol. III, No. 3
Nashville Journal of Medicine and Surgery; September.
Richmond Medical Journal; September.
Southern Medical and Surgical Journal; September.
Southern Journal of the Medical Sciences; September.
St. Louis Medical and Surgical Journal; September.
The Medical Record, New York; September.
The Medical Reporter, St. Louis; September.
The Dental Cosmos; September.
University Journal of Medicine and Surgery; September.
Zeitschrift fur Practische Heilkunde. September.
The American Journal of Medical Science, Philadelphia, new series, September.
Phrenological Journal, New York.
The Druggist's Circular; September.
Chicago Medical Examiner; September.
Chicago Medical Journal; September.
The Agriculturalist, New York; September.
The Eclectic Journal of Medicine; September.
The Medical Investigator; September.
The Medical Gazette, a Weekly Review of Practical Medicine, Surgery, and Obstetrics; A. Simpson & Co., Publishers, New York; September.

THE NEW SYDENHAM SOCIETY.

The following extract from the Laws of the Society will sufficiently explain its objects:

I. "The Society is instituted for the purpose of supplying certain acknowledged deficiences in the existing means of diffusing medical literature, and shall be called The New Sydenham Society.

II. "The Society shall carry out its objects by a succession of publications, of which the following shall be the chief: "1. Translations of Foreign Works, Papers, and Essays of merit, to be reproduced as early as practicable after their original issue. 2. British Works, Papers, Lectures, &c., which, whilst of great value, have become from any cause difficult to be obtained, excluding those of living authors. 3. Annual Volumes, consisting of Reports in Abstract of the progress of the different branches of Medical and Surgical Science during the year, 4. Dictionaries of Medical Bibliography and Biography. Those included under Nos. 1 and 2 shall be held to have the first claim on the attention of the Society, and the carrying out of those under 3 and 4 shall be considered dependent upon the amount of funds which may be placed at its disposal."

Several handsome volumes are issued every year, and members receive notice of their arrival immediately upon their receipt from London by the Secretary in Philadelphia. The duty and expenses on their importation are paid by the members, who are requested to give detailed instructions respecting the mode by which they wish their volumes to be forwarded, and also to remember that the Society's responsibility ceases when the book has been delivered according to the instructions given.

The subscription constituting a member is Seven Dollars and a half, to be paid in advance on the 1st of January annually, entitling the subscriber to a copy of every work published for that year. No books are issued to any member until his subscription for the year has been paid. The best mode of sending money is by post office order, payable to the Secretary at Philadelphia.

RICHARD J. DUNGLISON, M. D.,
Hon. Local Secretary, 1116 Girard Street, Philadelphia.

LIST OF WORKS ALREADY ISSUED.

On Syphilis in Infants. By Paul Diday. Translated by Dr. Whitley.

On the More Important Diseases of Women and Children, with other Papers, by Dr. Gooch. Reprinted; with a Prefatory Essay by Dr. Robert Ferguson. (With Woodcuts.)

Memoirs on Diphtheria: containing Memoirs by Bretonneau, Trousseau, Daviot, Guersant, Bouchut, Empis, etc. Selected and Translated by Dr. R. H. Semple.

On the Minute Structure and Functions of the Spinal Cord. By Professor Schrœder Van Der Kolk. (With Lithographs.)

On the Minute Structure and Functions of the Medulla Oblongata, and on the Proximate Cause and Rational Treatment of Epilepsy. By Professor Schrœder Van Der Kolk. Translated by Dr. W. D. Moore, of Dublin. (With Lithographs.)

Experimental Researches on the Effects of Loss of Blood in Inducing Convulsions. By Drs. Kussmaul and Tenner. Translated by Dr. Bronner, of Bradford.

On the Process of Repair after Resection and Extirpation of Bones. By Dr. A. Wagner, of Berlin. Translated by Mr. T. Holmes. (With numerous Woodcuts.)

Three Memoirs on Glaucoma and on Iridectomy as a Means of Treatment. By Professor Von Græfe. Translated by Mr. T. Windsor, of Manchester.

Memoirs on Abdominal Tumors and Intumescence. By Dr. Bright. Reprinted from the "Guy's Hospital Reports," with a Preface by Dr. Barlow. (Numerous Woodcuts.)

A Clinical Account of Diseases of the Liver. By Professor Frerichs. Two Volumes. Translated by Dr. Murchison. (With Colored Lithographs, and numerous Woodcuts.)

A Yearbook of Medicine and Surgery, and their Allied Sciences, for 1859. Edited by Dr. Harley, Dr. Handfield Jones, Mr. Hulke, Dr. Graily Hewitt, and Dr. Odling.

The First Fasciculus of an Atlas of Portraits of Skin Diseases; comprising three Plates, 18 in. by 24 in., copied from those of Hebra, and illustrating: Favus, Tinea Tonsurans, Lupus Exulcerans.

Casper's Medical Jurisprudence. Four volumes. Translated by Dr. G. W. Balfour, of Edinburgh.

Czermak on the Practical Uses of the Laryngoscope. Translated by Dr. G. D. Gibb. (Numerous woodcuts.

On Thrombosis of the Cerebral Sinuses. By Professor Von Dusch. Translated by Dr. Whitley.

Schrœder Van Der Kolk on a Case of Atrophy of the Left Hemisphere of the Brain. Translated by Dr. W. D. Moore, of Dublin. (With Four Lithographs.)

Radicek's Papers on the Application of Statistics to Medical Enquiries. Translated by Dr. Bo

Esmarch on the Uses of Cold in Surgical Practice. Translated by Dr. Montgomery.

A Yearbook of Medicine and Surgery, and their Allied Sciences, for 1860. Edited by Dr ley, Dr. Handfield Jones, Mr. Hulke, Dr. Graily Hewitt, and Dr. Sanderson.

A Second Fasciculus of the Atlas of Portraits of Skin Diseases; comprising Plates from Hebra, illustrating Psoriasis Diffusa; Ichthyosis; Lupus Serpiginosus; Alopecia Areata.

A Yearbook of Medicine and Surgery, and their Allied Sciences, for 1861. Edited by Dr. Harley, Dr. Handfield Jones, Mr. Hulke, Dr. Grailly Hewitt, and Dr. Sanderson.

A Third Fasciculus of the Atlas of Portraits of Skin Diseases: comprising Plates, illustrating Lupus Scrophulosus, (Cicatrizing); Herpes Zoster Frontalis, (Affecting the Frontal and Trochlear branches of the Fifth Nerve); Molluscum Contagiosum—A, on a Child's Face; B, on the Breast of the Child's Mother; C, Anatomical Characters of the Tumors; D, Microscopic Characters.

The Aural Surgery of the Present Day. By W. Kramer, M. D., of Berlin. Translated by Henry Power, Esq., F. R. C. S., M. B. (With two tables and nine woodcuts.)

A Yearbook of Medicine and Surgery, and their Allied Sciences, for 1862. Edited by Dr. Montgomery, Dr. Handfield Jones, Mr. Windsor, Dr. Grailly Hewitt, and Dr. Sanderson.

A Guide to the Qualitative and Quantitative Analysis of the Urine. By Dr. C. Neubauer and Dr. J. Vogel. Fourth edition, considerably enlarged. Translated by William O. Markham, F. R. C. P. L. (With four lithographs and numerous woodcuts.)

On the Anomalies of Accommodation and Refraction of the Eye, with a Preliminary Essay on Physiological Dioptrics. By F. C. Donders, M. D., Prof. of Physiol. and Ophthalmology in the University of Utrecht. Translated from the author's manuscript by W. D. Moore, M. D.

A Yearbook of Medicine and Surgery, and their Allied Sciences, for 1863.

A Fourth Fasciculus of the Atlas of Portraits of Skin Diseases: comprising Plates, illustrating Leucoderma, Morbus Addisonii.

A Yearbook of Medicine, Surgery, and their Allied Sciences, for 1864.

A Fifth Fasciculus of the Atlas of Portraits of Skin Diseases.

The following Works are in preparation for the Society:—A Yearbook for 1865.
Greisinger's Handbook of the Pathology and Treatment of Mental Diseases.
Atlas of Skin Diseases.
Smellie's Midwifery. Edited by Prof. Simpson.

Subscribers can procure the Entire Series, or they can commence at any year they may prefer, or procure the books of any single year without subscribing for the others. The following is the order of the works, according to the years for which they were issued:

1859. (FIRST YEAR.)

Vol. 1. Diday on Infantile Syphilis. 2. Gooch on Diseases of Women. 3. Memoirs on Diphtheria. 4. Van Der Kolk on the Spinal Cord, etc. 5. Monographs (Kussmaul & Tenner, Græle, Wagner, etc.)

1860. (SECOND YEAR)

Vol. 6. Dr. Bright on Abdominal Tumors. 7. Frerichs on Diseases of the Liver, vol. 1. 8. A Yearbook for 1859. 9. Atlas of Portraits of Skin Diseases, (1st Fasciculus.)

1861. (THIRD YEAR.)

Vol. 10. A Yearbook for 1860. 12. Monographs (Czermak, Dusch, Radicke, etc.) 12. Casper's Forensic Medicine, vol. 1. 13. Atlas of Portraits of Skin Diseases, (2d Fasciculus.)

1862. (FOURTH YEAR.)

Vol. 14. Frerichs on Diseases of the Liver, vol. 2.) 15. A Yearbook for 1861. 16. Casper's Forensic Medicine, vol. 2. 17. Atlas of Portraits of Skin Diseases, (3d Fasciculus.)

1863. (FIFTH YEAR.)

Vol. 18. Kramer on Diseases of the Ear; 19. A Yearbook for 1862. 20. Neubauer and Vogel on the Urine.

1864. (SIXTH YEAR.)

Vol. 21. Casper's Forensic Medicine, vol. 3. 22. Donders on Anomalies of Accommodation, etc., of the Eye. 23. A Yearbook for 1863. 24. Atlas of Portraits of Skin Diseases, (4th Fasciculus.)

1865. (SEVENTH YEAR.)

Vol. 25. A Yearbook for 1864. 26. Casper's Forensic Medicine, vol. 4. 27. Atlas of Portraits of Skin Diseases, (5th Fasciculus.)

1866. (EIGHTH YEAR.)

1. Bernutz and Goupil on Diseases of Women, vol. 1. 2. Fasciculus of Atlas of Portraits of Diseases of the Skin (three beautiful colored plates, life size.) 3. Hebra on Diseases of the Skin, vol. 1. 4. Bernutz and Goupil on Diseases of Women, vol. 2.

1867. (NINTH YEAR.)

1. Griesinger on Mental Diseases. 2. Biennial Retrospect of Medicine and Surgery. 3. Fasciculus of Atlas of Portraits of Diseases of the Skin (colored plates.) 4. Hebra on Diseases of the Skin, vol. 2.

☞ Annual Subscription, $7 50 in advance, (the duty, &c., payable on arrival of the vols., amounting to about $2 50 additional.)

BELLEVUE HOSPITAL MEDICAL COLLEGE,

CITY OF NEW YORK.

SESSIONS OF 1867—1868.

The Collegiate year in this institution embraces a Preliminary Autumnal Term, the Regular Winter Session, and a Summer Session.

The Preliminary Autmnal Term for 1867–68, will commence on Wednesday, September 18th, 1867, and continue until the opening of the Regular Session. During this term, instruction, consisting of didactic lectures on special subjects and daily clinical lectures, will be given, as heretofore, exclusively by members of the Faculty. Students designing to attend the Regular Session are strongly recommended to attend during the Preliminary Term, but attendance during the latter is not required.

The Regular Session will commence on Wednesday, October 16, and end about the 1st of March, 1868.

The Summer Session for 1868 will commence on the second Wednesday in March, and continue twelve weeks. This term will embrace courses of didactic lectures by the members of the Faculty of the Summer Session, together with clinical lectures at Bellevue Hospital, and the Charity Hospital, Blackwell's Island, and the daily recitations. Lectures will also be given by members of the College Faculty.

FACULTY OF THE COLLEGE.

ISAAC E. TAYLOR, M. D., Emeritus Professor of Obstetrics and Diseases of Women and Children, President.
James R. Wood, M. D., Professor of Operative Surgery and Surgical Pathology.
Frank H. Hamilton, M. D., Professor of Military Surgery, Fractures and Dislocations, and the Principles of Surgery.
Lewis A. Sayre, M. D., Professor of Orthopedic Surgery.
Alexander B. Mott, M. D., Professor of Surgical Anatomy.
W. H. Van Buren, M. D., Professor of Diseases of the Genito-Urinary System.
George T. Elliot, M. D., } Professors of Obstetrics and Diseases of Women and Children.
Fordyce Barker, M. D., }
Benjamin W. McCready, M. D., Professor of Materia Medica and Therapeutics.
Stephen Smith, M. D., Professor of Descriptive and Comparative Anatomy.
Austin Flint, M. D., Professor of the Principles and Practice of Medicine.
R. Ogden Doremus, M. D., Professor of Chemistry and Toxicology.
Austin Flint, Jr., M. D., Professor of Physiology and Microscopy.
William A. Hammond, M. D., Professor of Diseases of the Mind and Nervous System.
N. R. Moseley, M. D., Demonstrator of Anatomy.
J. W. Sonthack, Jr., M. D., Assistant Demonstrator of Anatomy.

FACULTY OF THE SUMMER SESSION.

Henry D. Noyes, M. D., Professor of Opthalmology, and Dean of the Summer Faculty.
J. Lewis Smith, M. D., Professor of Morbid Anatomy.
Foster Swift, M. D., Professor of Diseases of the Skin.
Prof. Wm. H. Van Buren, M. D., Lecturer on Diseases of the Genito-Urinary System.
Prof. R. Ogden Doremus, M. D., Lecturer on Animal Chemistry.
Prof. Austin Flint, Jr., M. D., Lecturer on Microscopical Anatomy.
Prof. George T. Elliot, M. D., Decturer on the Diseases of Children.
Prof. William A. Hammond, M. D., Lecturer on Diseases of the Nervous System.

A distinctive feature of the method of instruction in this College is the union of clinical and didactic teaching. All the lectures are given within the Hospital grounds. During the Regular Winter Session, in addition to four didactic lectures on every week-day, except Saturday, two or three hours are daily allotted to clinical instruction. The union of clinical and didactic teaching will also be carried out in the Summer Session, nearly all of the teachers in this Faculty being physicians and surgeons in the great Charity Hospital on Blackwell's Island.

FEES FOR THE REGULAR SESSION.

Fees for tickets to all the lectures during the preliminary and Regular Term, including clinical lectures	$140 00
Tickets for any of the several departments may be taken out separately.	
Matriculation fee	5 00
Demonstrator's ticket (including material for dissection)	10 00
Graduation fee	30 00

Students who have attended two full courses in other accredited schools receive all the tickets for $70, exclusive of the matriculation fee. Students who have attended two full courses in this College, or after one full course in this College, having previously attended a full course in some other accredited school, are required to matriculate only. Graduates of other accredited schools, after three years, dating from the time of graduation to the end of the term, are required to matriculate only; prior to three years, they receive a general ticket for $70.

FEES FOR THE SUMMER SESSION.

Matriculation fee (valid for the succeeding Winter Session)	$ 5 00
Fee for each of the separate courses of lectures	10 00
General ticket admitting to all the lectures	50 00

Graduates of the Bellevue Hospital Medical College will be admitted to the lectures of the Summer Session on the Matriculation ticket: all others will be required to take out-tickets.

☞ The dissecting-room will be kept open until about the first of May.

Payment of Fees is invariably required at the commencement of the Session. There are no exceptions to this rule.

Students, on arriving in the city, are requested to report at once at Bellevue Hospital, situated on the East River, between Twenty-sixth and Twenty-eighth Streets, and inquire for the Janitor of the College, who will take pains to aid them in securing comfortable accommodations without delay. Entrance to the Hospital is on Twenty-sixth Street.

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address the Secretary of the College, Prof. Austin Flint, Jr., Bellevue Hospital Medical College

For information concerning the Summer Session, address the Secretary of the College, or Prof. Henry D. Noyes, No. 68 Madison Avenue, Dean of the Summer Faculty.

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WITH

PROF. HALL'S COPPER SCROLL LIGHTNING ROD.

JOHN S. TRIPLETT & CO., are the sole proprietors for the State of Texas, and will promptly execute any work ordered, guaranteeing it a certain protection against the ravages of electricity.

All scientific persons are invited to examine it, and for themselves decide upon its merit.

It requires no insulation—will not rust or corrode, and has eight times the conducting power of iron with the same surface.

Reliable agents wanted to canvass the State.

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Office Mills' Building, Galveston, Texas.

GALVESTON, June 7, 1867.

The undersigned have made an examination of the Challenge Copper Scroll Lightning Rod, patented by Prof. Hall and introduced into Texas by John S. Triplett, Esq., General Agent.

We find the claims of the Patentee based upon the principles of true science and experience, and we take pleasure in commending it to the confidence and patronage of our people, as incomparably the best means of security against the ravages of lightning that has ever come under our knowledge or observation: C. G. Forshey & Co , consulting engineers, Strand, Galveston; Greensville Dowell, M. D., Professor of Anatomy and Editor Galveston Medical Journal; Tipton Walker, Civil Engineer; C. G. Young, M. D., and President Houston and G. N. R.R. Co.; W. W. Martin, Supt. Public Buildings.

It has also the endorsement of the following underwriters and insurance agents, viz; James Sorley, Agent Underwriters' Agency New York; E. P. Hunt, Insurance Agent; J. S. Sellers, President Merchants' Mutual Insurance Co.; D. F. Holland, General Insurance Agent.

CATALOGUE

OF THE SESSION OF 1866-7,

AND

ANNUAL ANNOUNCEMENT

OF

GALVESTON MEDICAL COLLEGE

FOR THE SESSION OF 1867-8.

TRUSTEES:

HON. GAB. FELDER, *President of the Board.*
R. W. KENNON, *Secretary of Board.*

J. H. DAVIDSON,
J. W. SHIPMAN,
ROBT. ALEXANDER,
WM. CHAPPELL,
M. NORTHINGTON,
JOSIAH WHIPPLE,
J. W. ROUT,
R. W. KENNON,
J. D. GIDDINGS,
ALLEN LEWIS,
J. C. WALLIS,
J. H. WEBB,
JORDAN HILL.

FACULTY:

J. BORING, M.D., PRESIDENT; *Prof. of Obstetrics and Diseases of Women and Children.*
WM. H. GANTT, M.D., *Professor of Surgery.*
J. H. WEBB, M.D., *Professor of Materia Medica and Therapeutics.*
GREENSVILLE DOWELL, M.D., *Professor of Anatomy.*
D. PORT. SMYTHE, M.D., *Professor of Chemistry.*
FRANCIS D. HOLLINQUIST, M.D., *Professor of Physiology.*
T. J. HEARD, M.D., *Professor of Theory and Practice of Medicine.*
R. D. WEBB, M.D., *Professor of Pathology and Clinical Medicine.*
R. H. HANNA, M.D., *Demonstrator of Anatomy.*

THE REGULAR COURSE OF LECTURES

will begin on the First Monday in DECEMBER, 1867, and close on the First Wednesday of MARCH, 1868.

FEES.

TICKETS, Full Course,	$105 00
Matriculation, once	5 00
Demonstrator's Ticket	10 00
Diploma	25 00

◆

FREE LIST.

In consideaation of the impoverished condition of the country, many worthy indigent Students can not support the expense of a Medical Education, therefore, it is

Resolved,—That a Student from each Judicial District in the State, be admitted free of cost for the Regular Tickets and requisites for admission. The applicant shall have a good education, and shall have been under the private instruction of some respectable Physician at least one year; be of good moral character and steady habits, and without the means of payment of the fees for the course.

◆

APPOINTMENT.

The District Judge in each District is empowered to nominate such candidate, based entirely upon the highest mental and moral claims. Preference will be given to those laboring under physical disability to engage in the mechanical and agricultural pursuits.

G. A. BEHRMAN,
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GALVESTON, Texas.

THE

Galveston Medical Journal.

VOL. II. NOVEMBER, 1867. No. 11.

Extirpation of the Entire One Half of the Inferior Maxillary Bone.

BY J. D. RANKIN, M. D., OF PALESTINE, TEXAS.

PROF. DOWELL:—About the first of last May I received for treatment Mrs. C—, who had for six months been suffering from necrosis of one half of the inferior maxillary bone. The history of this case is as follows: Late in the fall of 1866, she became afflicted with a species of inflammatory sore mouth—was treated by her attending physician for some time without any relief, and at about the end of six weeks, she had an abcess to rise and burst about the angle of the right inferior jaw bone. This abcess, to her surprise, did not close, but continued to discharge a very fetid pus. Very soon the side of the face began to swell, and continued to do so, until a very large intumescence was formed, which continued to form a succession of abcesses, which discharged through seven distinct openings along the inferior portion of the jaw bone. For this state of things she consulted various medical men, all of whom refused to operate upon her; some telling her that her cure was hopeless, others saying that Prof. Stone, of New Orleans, could perform an operation for her that would eventuate in a cure, but that no one in this State (Texas) could perform such an operation. She applied to me under this state of advice in a worn down state of health from long continued pain and a heavy drain from her system, by the long continued and profuse discharge of pus. After advising her of the true nature of her case, I proposed to undertake the operation and cure of the case. I treated her for eleven days, so as to get a good condition of the various secretions, and then proceeded to operate.

Operative Procedure.—First, having attained a good and perfect state of anesthesia, I placed the patient on the left side, the right being affected, and with one sweep of the knife I made a cut from above the articulation of the jaw to a small distance past the symphysis of the chin in the course of the jaw bone, cutting through all the tissues down to the bone, dividing, as a matter of course, the facial artery, and the duct of steno. Next, I ligated the facial artery, then proceeded to notch the bone with a Hays' saw near the symphysis, and then cut it through with a pair of cutting forceps. Next, I carried the knife along the external and internal part of the bone, so as to separate from it the mylo hyoid, the mucus membrane, the internal pterygoid, the masseter, the temporal and the external pterygoid muscles. I then cut the bone in two with a pair of forceps, just below the condyle, leaving the head of the bone in its socket, with the capsular ligament entire.

The bone being removed and the operation completed I dressed the wound with surgeon's lint, and closed the cut by adhesive straps. The parts were not disturbed until the third day, when I opened the wound, and removed the lint and washed out the parts thoroughly and replaced the lint again. This I did every day afterwards, until the entire cavity was closed up by granulations from the bottom. At the end of thirty days the external wound was about three-fourths of an inch long, and the internal opening was about the size of a medium bullet hole. I then pared the edges of the wound and closed it by two stitches and adhesive straps, with a view of obtaining adhesive inflammation and closing up the wound at once, but to my surprise, that night the wound was attacked with Erysipalatus Inflammation, which spread rapidly to the face and scalp, closing the eyes and nose, and presenting a frightful aspect, with a most intense state of excitement of the vascular and nervous system.

I now found myself in new trouble. I at once took off all dressings in the way of stitches and straps and applied soft poultices of slippery elm to the parts, and gave internally Quinine, Calomel, Tinct. Iron and Veratrum. As soon as the vascular and nervous sensibilities were properly impressed by those remedies, and by the Veratrum in particular, the inflammation gave way as quickly as a frost would melt under a morning's sun. After curing the Esysipaloid Inflammation I was satisfied to proceed with the slow process of cure by granulation, which I did, and at the end of one month and twenty-four days, I discharged this patient sound and well, and she is now, at this writing, in a fine state of health, doing all her domestic work, washing and cooking included.

REMARKS.—This case is interesting in more than one respect. In the first place, it clearly shows that a perfect cure can be obtained in cases where there is extensive death of large and important bones, and that these cures can be made speedily, and that a person is not to be condemned to death because they may have a necrosed jaw bone.

The case also shows how particular we should be in surgical cases, in regard to using all our means to obviate Erysipaloid Inflammation.

The medical treatment illustrates in a powerful manner the powerful influence of Veratrum over Erysipaloid Inflammation. This treatment I know to be rather contrary to the general view of the treatment of Erysipelas, but Erysipelas is an inflammation, and all inflammations yield whenever the vascular and nervous sensibilities are properly controlled, and we have no agent that so powerfully effects this object as Veratrum.

Conveyance of Cholera from Ireland to Canada and the United States Indian Territory, in 1832.

BY JOHN C. PETERS, M. D., OF NEW YORK.

From Dr. R. Nelson's account we select the following: Early in the spring of 1832 the following infected vessels arrived at Quebec, Canada: The ship Robert sailed from Cork on May 14th, and had 10 deaths from cholera; the Constantia, April 28th, from Limerick, with 29 deaths, the Elizabeth, May 28th, from Dublin, with 17 deaths; the Carrick, from Dublin, June 3d, with 42 deaths; ship Brubus, May 18th, from Liverpool, with 81 deaths.

All these ships and their passengers were quarantined at Grosse Isle, a few miles below Quebec. On June 7th the St. Lawrence steamer Voyageur conveyed a load of these emigrants and their baggage, some to Quebec and the majority to Montreal on the 10th.

The first cases of cholera in America occurred in emigrant boarding houses in Quebec on the 8th, and the same pest steamboat, the Voyageur, landed persons dead and dying of cholera at Montreal, a distance of 200 miles, in less than 30 hours; and over this long distance, thickly inhabited on both shores of the St. Lawrence, cholera made a single leap, without infecting a single village, or a single house between the two cities, with the following exceptions: A man picked up a mattress thrown from the Voyageur, and he and his wife died of cholera; another man fishing on the St. Lawrence was requested to bury a dead man from the Voyageur, and he, his wife and nephew died. The captain of a passing boat requested an Indian to bury a man from on board; this and five other Indians were attacked and died.

The town of Three Rivers, half way between Quebec and Montreal, forbid steamers to land and escaped for a long time.

From Montreal the great influx of emigrants was forwarded away, by the Emigrant Society, as fast as they arrived, and by them the pestilence was sown at each stopping place. Kingston, Toronto and Niagara soon became affected. In the end over 4000 persons died of cholera in Montreal, and more than an equal number in Quebec.

The epidemic quickly reached Detroit in the same way. From the United States Army Report for 1832, page 81, we learn: It was at this period (June, 1832,) that Asiatic cholera made its first appearance on the northeast coast of Ameriea, and spread with fatal rapidity along the great water courses on our northern frontier, and continued west along the great lakes until in September it reached some of our military posts on the upper Mississippi. As the Sac and Fox Indians, headed by Black Hawk, were at this time in open hostility, our troops marching towards the theatre of war became exposed to the influence of the epidemic. Speaking of this event, Major General Macomb, in his annual report, says: Unfortunately, however, the cholera was just at this time making its way into the United States from Canada, and infected our troops while on board the steamboats in their passage up the lakes; and such was the rapidity with which this disease spread among them that, in a few days, the whole force sent by the lakes was rendered incapable of taking the field. Some were landed, but the principal reached Chicago in a most deplorable condition. Six companies of artillery left Fortress Monroe, Virginia, in perfect health, contracted the cholera at Detroit, and reached Chicago with a loss of one out of every three men.

On page 86 we read: Fort Dearborn, near Chicago, was temporarily re-occupied during the campaign against Black Hawk in 1832, and it was here that epidemic cholera displayed its most fatal effects among our troops. Out of 1000 men over 200 cases were admitted into hospitals in the course of 7 or 8 days. Surgeon DeCamp inclined to the opinion of its contagiousness, because previous to the arrival of the steamboat which brought the disease to Fort Dearborn, there had not been a case of disease of this kind at the fort or in the village. When these troops again marched for the Mississippi they appeared in perfect health, yet it broke out again on the way, and when the command reached the Mississippi it became as fatal as it had been at Fort Dearborn.

On page 90 we read: The garrison at Fort Niagara also suffered from epidemic cholera in 1832, when on its march towards the theatre of Indian hostilities. Having reached Detroit on the 30th of June, 1832, the troops were mustered and inspected, no man being on the sick list. On the 6th of July the first case occurred, and by the 20th 47 men, out of a company of 78, had been attacked. As regards the cause of the sudden appearance of this disease at Detroit, leaving an intermediate country of considerable extent unaffected, it was generally believed at the time that the principle of infection existed in the steamboat in which the troops were conveyed from Buffalo to Detroit, this vessel having been employed in transporting crowds of filthy foreign emigrants westward from Montreal and Quebec. The "Henry Clay," among the troops on board of which the disease also appeared, had been engaged in the same kind of service.

On page 159 we read, that it also reached Fort Crawford, on the Mississippi, two miles above the mouth of the Wisconsin; and Fort Leavenworth, on the Missouri river, about 500 miles above its confluence with the Mississippi; also, Jefferson Barracks, 10 miles below St. Louis; and Fort Gibson, on the Neosho or Grand river, in Arkansas. Our troops handed the disease over to the Indians.

Rosin-Weed—Silphium Laciniatum. A New Remedy; Reputed a Specific in Asthma.

BY H. D. GARRISON, M. D.

Within the last eighteen months several persons have in a more or less confidential manner informed me, that the Rosin-weed is an infallible remedy for Asthma. Numerous parties, professional and non-professional, have related to me cures effected by this agent in cases before considered wholly incurable by the medical faculty.

The substance of this information, derived thus from parties in most cases entirely unaware of the existence of any previous information on the subject, as they were in some cases even ignorant of the existence of each other, not only makes the discovery justly common property, but gives it a degree of reliability not pertaining to the reputation of many new remedies.

I would not willingly assist in placing another unnecessary or doubtful remedy on the already overburthened catalogue; but were it possible would with pleasure aid in displacing a legion that only confuse and deceive the practitioner, and encumber the materia medica.

Farmers and others, intelligent on equine hygiene and treatment, quite uniformly agree that this plant is not only a perfect preventive, but a specific remedy for the heaves of horses, which is essentially the same disease as Asthma in man.

Dr. G. H. Dadd, of this city, in his new and very able work, entitled "*American Horse and Cattle Doctor*," p. 125, says: "The husbandmen who reside in the vicinity of where the rosin-weed grows, are well acquainted with the properties of this plant, and they declare that it is a specific for the treatment of Asthma or Heaves. I have used the article in the form of fluid extract prepared from the root, and find it to be a very valuable remedy. The dose (for a horse) of the fluid extract is two (fluid) ounces, morning and evening." After describing some varieties of asthma or heaves, necessarily incurable, because of some lesion of the respiratory apparatus, Dr. Dadd further adds, that "such cases, although considered incurable, may be palliated by the fluid extract of rosin-weed." In a recent conversation with Dr. Dadd, he declared himself more than ever, convinced of the great efficacy of this plant in the cure of *asthma in man* as well as in horses. It is singularly corroborative of the foregoing views that in those prairie regions where the rosin-weed abounds, also in those cities whose markets are supplied with hay from such sources, asthma or heaves in horses is quite unknown. During my residence in this city I do not recollect seeing a single case of heaves, though the streets are alive with horses which are not better used or fed than their race in the middle and eastern states where no affection is more common among them. Horses like this plant very much. On being fed hay containing it, they select all the rosin-weeds and eat them first.

Prof. King (Am. Dis., p. 871) ascribes to the *Silphium Profoliatum* tonic, diaphoretic, and alterative properties, and alludes to its successful employment in ague-cake (enlarged spleen) liver complaints, miasmatic fevers, etc. In the same article, under the head *Silphium Laciniatum* and *S. Gumiferum*," he in addition recommends them in "dry, obstinate coughs," and laconically adds, "Said to cure the heaves in horses."

To the foregoing therapeutic properties, should they be established by more extended experience, may undoubtedly be added another, viz: *powerfully diuretic*. A very intelligent gentleman who has collected large quantities of this and other medicinal plants for us during the past two years, stated to the writer, a few days since, that the rosin-weed acts so powerfully on the kidneys as to cause dull pain, and even considerable distress in the region of the kidneys of those who used it to any great extent. This property, mentioned also by others, will suggest to the intelligent physician a much wider range of usefulness than has before been ascribed to this plant. There are many diseases of the urinary apparatus yet deemed incurable, while most of such affections are by no means uniform in their submission to treatment. It is hoped that this remedy will supply some deficiency in the list of renal remedies.

The Rosin-weed, *Silphium Laciniatum*, known also by the common names "Polar Plant" or "Compass Plant," from the circumstance that its leaves quite uniformly point north and south, is a member of the large order *Compositæ*, and abounds throughout the high rolling western praries. The stem is from three to ten feet high, and rough, with white hispid hairs. Leaves are one-half to two feet long, much divided, alternate and lower ones petiolate. The stalk bears four to eight large showy heads with yellow rays, and flowers in July and September. The root is large, sprangling, and of a tough, leathery consistence. A smoothly cut surface presents a resinous lustre. The entire plant is possessed of a bitterish taste, but pleasant aroma, due to a volatile oil. Other species of this genus, as *S. Perfoliatum*, are also known as "Rosin-weed," "Indian Cup Plant," &c., and are possessed of similar, if not identical, medicinal properties. The whole genus, embracing five species, abounds in volatile oil and resin, which exudes in the form of small white spots or tears similar to those of mastich.

I have made a thorough chemical investigation of this plant to determine in what form its active principles could best be presented for administration; and conclude, that a fluid extract of high alcoholic strength is the only reliable form in which it can be used. The root when fresh is rich in essential oil, which is gradually converted by oxidation into resin, just as oil of turpentine by oxidation produces common rosin. As the resin of the Silphium is not pulverizable, and as it is not yet known whether the good effects of the remedy are due to the oil or to the product of its oxidation (resin), it is plain that no "powder" can fully represent the plant. A solid extract from which most of the oil is necessarily absent would not be eligible unless the activity is first shown to reside in the resin or some other part of the plant besides the oil.

Infusions and decoctions of resinous or oleiferous articles, though often the only form at command, are never more than fractional representations of the articles employed. The powdered root or plant would contain but little oil, owing to the thorough drying necessary to effect pulverization.

A fluid extract skilfully made as above indicated will contain all the oil, resin, and every other medicinal proximate principle of the plant in their native state and proportions, together with all the freshness and aroma of the plant unimpaired, and will accurately represent the root drop for grain. The dose of the fluid extract is from twenty to forty drops.

Reception and Address of T. Spencer Wells at New York.

New York, Sept. 20th, 1867.

Editors Medical and Surgical Reporter:

One of the most interesting and pleasing events which has recently broken the dull monotony of medical affairs in this city, is the very cordial reception which was tendered to the distinguished ovariotomist whose name heads this article, and whose fame is as widely spread as a knowledge of the operation itself. To speak of ovariotomy, and omit to mention the name of Mr. Wells, would be very much like playing Hamlet, with the part of Hamlet left out. Besides the qualities of intrepidity, caution and original investigation, which are common to all pioneers in new and difficult surgical paths, the Doctor possesses an inexhaustible fund of amiability and good nature, which has rendered his name quite as celebrated in the social as in the medical world. Moreover, the Doctor thoroughly appreciates and heartily recognizes the genius and talent of the American profession, and especially admires the progressive element as the distinguishing feature of our medical institutions. Those who have had the pleasure of meeting Mr. Wells in his own city, have invariably brought back with them pleasant recollections of his professional courtesy and generous treatment. It was but meet and proper that his welcome here should be of such a nature as to remind him that the profession in America had not forgotten his many kindnesses. We are proud to say, for the honor of New York, that he was received right royally. As many of the profession as could be conveniently crowded into the Mott Memorial Rooms in Madison Avenue, were gathered together on last Wednesday evening. The supper was, of course, the main feature of the evening. I shall not attempt to describe it—adjectives would be weak and quite out of place. Suffice it to say, that a New York alderman could not have found fault with it. Mr. Wells was the great centre of attraction, and bore his blushing honors with appropriate modesty and meekness. To innumerable requests he gave the ready answer, "Yes," and finally engaged to deliver an address to the profession, in the lecture-room of the Bellevue Hospital Medical College, on the Friday following, at 11 A. M. This being duly announced, drew a very large audience to the appointed place this morning. At a few minutes after 11 o'clock, the distinguished lecturer appeared, accompanied by the faculty of the college. He was introduced by President Taylor, and after being heartily applauded, delivered a very interesting lecture upon the subject of

OVARIOTOMY.

The lecture, in its way, was a model one. For clearness of style and conciseness in regard to subject matter, we have rarely heard it equalled. It is much to be regretted that the speaker was compelled to condense his experience upon this subject in one short address of less than an hour. But seeing that this had to be done, we do not know how it could have been better done in the short time allotted.

After a few introductory remarks, in which the speaker expressed his surprise and gratitude for the very cordial welcome he had received in this city, he congratulated the students present upon the very superior advantages they possessed for medical instruction. He believed they were fully equal, perhaps superior, to the schools of the continent in many respects. "We do not have any such lecture-rooms," said he, "in England as this. With the exception of the great hall in Munich, where Liebig delivers his lectures on chemistry, there is nothing superior to this hall, as a medical lecture-room in Europe." In England, the speaker said that we were only just beginning to find out how things were done in America. It had been suggested to him, when he asked the gentlemen who so kindly welcomed him here, upon what subject he should address the profession, that he might repeat some of the random observations that he had made on ovariotomy that evening. The Doctor was surprised to find that the same prejudice against the operation, as one being attended with great mortality, existed in this country as well as his own.

He found, on conversing with Drs. Peaslee and Atlee, that they had to encounter about the same opposition as he did. With regard to mortality, he would say, that according to his own experience, it was about 28 or 29 per cent. He had operated on 228 cases. In the first hundred, the per cent. of deaths was 34; in the second hundred, 28 died; and in the third hundred, about 24 per cent. This mortality is by no means unusual in ordinary surgical operations. If the cases could be selected, the mortality would be far smaller; but very frequently patients insist upon the operation when there is only a very slight hope for a successful result. In cases where the prospects of success were slight, and yet the patient wished for an operation, he had been in the habit of allowing the patient to decide. These "forlorn hopes," of course, swell the mortality, but under certain given, common sense principles, the operation is a comparatively safe one. In regard to the mode of operating, he would at first say, that there was something in preparing the patient for the operation. She should, if possible, be sent to the country, where plenty of fresh air and good food could be had. If kept in the city, everything around her should be as clean and comfortable as possible. Two days before the operation, the bowels should be well cleared out, and again on the morning of the operation, by an injection. A rubber sheet, fastened around the patient by adhesive plaster, with an oval opening in front, through which the necessary incisions can be made, will conduce much to the comfort of the patient by preventing the fluids of the cyst and abdominal cavity from wetting the clothes. Some operators advise a half-sitting position. There is no advantage arising from this position, and there is some advantage in the recumbent position. It is, therefore, to be preferred. With regard to the incisions, they have been made of various lengths. The earlier operators usually made them very long, so that the whole abdomen might be rapidly exposed. Later operators have used smaller incisions, generally just large enough to allow of the cyst being emptied of its contents, and then drawn out.

It is difficult in the present state of ovariotomy to make conclusions as to the difference in mortality resulting from these two methods of procedure. In my own practice, I have found that an incision of five or six inches is usually long enough. If we are obliged to exceed this *limit*, and go beyond the navel, the mortality seems to be increased. As a rule, the incision should be in the linea alba. Other incisions in an oblique and transverse direction have been recommended and have their advocates, but we have come to the conclusion that the incision in the linea alba is the best method for the removal of either, or both ovaries. In getting at the cyst, we usually have to go through a little subperitoneal fat, after which the cyst can generally be found without difficulty. If loose and free, it will not even be necessary to introduce the hand; but if there are adhesions to the abdominal walls, they will have to be gently separated by the hand. Abdominal adhesions do not add very materially to the risks of the operation. The adhesions to the pelvis are of considerable more importance, especially where they are connected with the rectum or bladder. In emptying the cyst, the common trocar and canula of a somewhat large size may be used, but finding a considerable trouble in using this, I have devised the instrument which I now show to you. In using the ordinary trocar, some fluid is very apt to escape into the peritoneal cavity, but with this instrument the cyst can be rapidly emptied, and afterwards drawn out without any such accident. It consists of a hollow tube about three-eighths of an inch in diameter, very much in the form of a pen at the cutting extremity. This hollow cutting tube slides into a guard, to which for the sake of convenience, a pair of sharp hooks, one on either side, is attached, with which the cyst can be seized and drawn out after being emptied. To the end of this is attached a long elastic tube by which the fluid may be led into any convenient receptacle.

Supposing now the sack to be removed, the question occurs what shall be done with the pedicle? There are two leading methods of treating the pedicle. One may be called the extra peritoneal, and the other the intra peritoneal. In the one the pedicle is brought out external to the wound and there retained; in the other, it is returned into the peritoneal cavity. Of these two methods, experience is decidedly in favor of the first. By whatever mode it is carried out, the results, on the whole, seem to be much better.

But there are certain cases in which the latter method is to be preferred. I think there is no doubt that when the pedicle is long enough, it is far better to carry it outside of the peritoneal cavity, and the best method to secure it there is the clamp. It is easily adjusted, and after the parts have been cut off above it, I usually apply a little perchloride or persulphate of iron, which acts both as a styptic and deodorizer. Suppose, however, you decide in a case where the pedicle is short, that it would be better to return it into the cavity. In these cases the ligature must be used. The ligature has been applied in a number of ways, and there are no very reliable statistics to tell us which way is the best, but we have come to the conclusion, that in cases where we may expect a certain amount of sthenic inflammation, that it is better to cut the ligature off short, and return the pedicle. In cases of weak constitution, it is better to bring the ligature out of the wound, so that a certain amount of drainage may be established. Better than either of these is the combination of the clamp and cauterization. The pedicle is first secured in the clamp, tightly compressed, and after being cut off, seared with the actual cautery. It is then cautiously opened, and if any vessels yet bleed, they can be secured with the ligature.

After cleansing the peritoneal cavity, we come to the closing of the external wound, which may be done by various methods. The only question of importance just here is, shall the peritoneum be included in the sutures, or not? By numerous experiments upon animals, the speaker felt satisfied that but one answer could be given to this question—the peritoneum should always be included in the sutures. The after treatment of these cases is usually extremely simple.

In giving opium, a dose sufficient to allay the pain is generally enough. It is not often that large doses of opium are necessary; I have seen cases where no opium at all was given, and the patients did very well, making a good recovery. In giving opium, it is better to give it by the rectum, reserving the mouth for food and drink. The after progress of these cases is most encouraging. In cases where only one ovary is removed, the other will be found quite sufficient for generative purposes; sometimes the disease attacks the remaining ovary, and this has been urged as an objection to the beneficial results of the operation. The same objection might be urged with equal force in those rare cases where after an eye or testicle has been removed, disease attacks the remaining organ.

The doctor, after concluding his remarks upon ovarian surgery, expressed the hope that the young gentlemen now present would avail themselves of the great advantages they possessed for instruction, and prove of even more benefit in their day and generation than their instructors have been in theirs.

Professor Wood then announced that Professor Stone, of New Orleans would address the profession of New York on Monday next, at 10 A. M. in this hall. M.

Passiflora Incarnata, a Remedy for Tetanus.

BY D. L. PHARES, A. M., M. D., OF NEWTONIA, MISS.

In 1838, while a student, my old friend, the late Dr. W. B. Lindsay, then of Bayou Gros Tete, La., directed my attention to this plant as an unrivalled remedy for tetanus infantum. He used it for thirty years with extraordinary success in all cases of tetanus neonatorum. While resident at Grand Gulf, Miss., he extended its uses; and after his removal to New Orleans, he still further enlarged his ideas as to its uses, several times requesting me to prepare and furnish him the medicine. Having no acquaintance with scientific Botany, and finding the plant differ much in strength in different samples, he naturally fell into the error of supposing that the difference resulted from using five or six species. He was finally convinced, however, that he had never used but one species, and that the difference in strength was caused by difference in locality of growth, season of gathering, mode of preparing, etc. As found on the dykes or levees around New Orleans, "it grows luxuriantly, but has no virtues at all." That grown on uplands is much better, and that gathered on "Bayou Gros Tete seems to be stronger." Last year, a few weeks before his death, he wrote, in answer to an inquiry which I had made: "I have much to say—I am satisfied it is no narcotic. It never stupefies or overpowers the senses. A patient under its full influence may be wakened up, and he will talk to you as rationally as ever he did; leave him for a moment, and he will soon be off to the Elysian Fields again. I have tried it, my friend, in all sorts of neuralgic affections, and have usually astonished my more enlightened patients with it. Many times I have had them to ask me what in the world it was that had such a sweet influence over them." From observing its very delightful effects, he always called the insipissated juice by the neither very classical nor scientific appellation, "somnum seraphium."

Last year was very unfavorable for making a good preparation, so that I sent him but a small quantity, which, he wrote, was too advantage in ulcers, neuralgias, and tetanus. I have seen wonderful effects from it in relieving tetanus; but, having no record of cases by me, I could not with propriety attempt to detail cases. I will merely mention one case from memory. Some ten years ago I was called to see an old lady in a distant part of the country, who was reported to be "having fits." I found her able to be up most of the time, but, while examining [illegible], convulsions came on, affecting mainly the trunkal muscles and drawing the head back. I gave her instantly a dose of the passiflora. The convulsions subsided, and she has never had one since. I continued the use of the medicine, in small doses, for a few days. I have used it treating tetanus in horses—a disease usually considered as inevitably fatal to that noble animal. It has never failed to cure the horse. Let one case suffice to illustrate. In 17[illegible], early one morning, one of my horses was found to have trismus. A number of remedies failing, and the spasm becoming general, apparently affecting all the muscles—tetanus erectus—I abandoned him. He was down, his legs extended, and every muscle so tense as to be immovable by any force that could be safely applied. After some hours at night, I concluded to try him with the passiflora; gathered a quantity—stems, leaves and flowers—pounded, moistened with water, expressed ten or twelve ounces, and poured down his throat through a tube introduced at the side of the mouth. He was then apparently dying, and no one believed he could survive half an hour. I saw him no more till next morning, when he was well and grazing at a distance from the place where I had left him the night before. During the late war, my son, Dr. J. H. Phares, had occasion many times to prescribe the passiflora for tetanus in horses, with one invariable result—prompt, perfect, permanent cure. He fortunately saw no case in the men.

The leaves are gathered in May, or as soon as the plant blossoms, but before forming fruit. In fact, the whole plant may be used. It must be pounded and the juice expressed through a strong cloth, into shallow glass or porcelain dishes, to dry as rapidly as possible in the shade, with free circulation of air. When dry, it is reduced to a powder by the use of mortar and pestle, bottled and closely corked. The dose of this powder is from one to four teaspoonsful, repeated *pro re nata*. I have made ethereal, acetous, aqueous and alcoholic preparations, and perhaps others; but the inspissated juice reduced to a powder is the best I have ever used. The size of the dose renders it somewhat objectionable. Some eight or ten years ago, I requested a manufacturing chemist of New York to prepare the concentrated active principle of the passiflora incarnata, which he promised to do; but he has never reported progress. If a concentrated solution could be obtained, I have no doubt it would supercede morphia and atropia for hypodermic medication, its action being so much more pleasant and safe. I have never seen the least unpleasant effect from it in any dose however large, although I have given it in quite large doses. When gathered later than May, the juice can never be sufficiently insipissated to be pulverized. It then contains too much sugar and gum. For external use, the whole plant may be boiled for an hour, then thrown out, and the extract thus obtained boiled down to a proper consistence for the object in view. For this purpose, the parennial roots answer well, gathered after the first frost in autumn.

The *incarnata* may be easily distinguished from the other species of passiflora. This and the *luteo* are the only two species found in the United States north of Florida. Three other species are found in Florida; but all these, like the P. luteo, are small and bear fruit less than half an inch in diameter, while the P. incarnana is much larger, grows in the open fields, bears a fruit about the size and shape of the Muscovy duck, and has serrated trilobate leaves. From the sharp report emitted by the immature fruit when crushed, it is very generally called the May-pop.

Since the foregoing was written, I have treated, with the fluid hydro-alcoholic extract of passiflora, obtained from the dried leaves by displacement, several cases of neuralgia, and one of sleepless, incessant motion and suicidal mania. With the same extract, during the current week, Dr. J. H. Phares has treated, with the most prompt and satisfactory success, a very virulent and hopeless case of tetanus, with opisthotonos, trismus, and convulsions, in a child two years old. Other most potent remedies, in heroic doses, having failed to produce any effect in this case, he thinks nothing but the passiflora could possibly have saved the child.

The Preparation of Pepsin.

The following method of preparing pepsin was published by Dr. Beale in his "Archives of Medicine," in 1857–58, and has been made by his recipe ever since, by Messrs. Bullock & Reynolds. "The mucous membrane of a perfectly fresh pig's stomach is carefully dissected from the muscular coat and placed on a flat board. It is then cleaned with a sponge and a little water, and much of the mucus, remains of food, etc., carefully removed. With the back of a knife, or with an ivory paper knife, the surface is scraped very hard, in order to press the glands and squeeze out their contents. The viscid mucus thus obtained contains the pure gastric juice, with much epithelium from the glands and surface of the mucous membrane. It is spread out upon a piece of glass, so as to form a very thin layer, which is dried at a temperature of 100° over hot water, or *in vacuo*, over sulphuric acid. When dry, it is scraped from the glass, powdered and kept in a stoppered bottle. A good digestive fluid may be made as follows: Of the powder, 5 grains; strong hydrochloric acid, 18 drops; water, 6 ounces. The fluid may be filtered easily, and forms a perfectly clear solution, very convenient for experiment. It may be taken with the salt at a meal. The powder is devoid of smell, and has only a slightly salt taste. This powder undergoes no change if kept perfectly dry. It contains the active principle of the gastric juice almost unaltered. Eight-tenths of a grain of this pepsin, with ten drops of dilute hydrochloric acid, and an ounce of distilled water, dissolve one hundred grains of hard boiled white of egg in from twelve to twenty-four hours.—*Medical Times and Gazette.*

Capsicum Annuum—(Linn.)—Cayenne Pepper.

BY JOSEPH BATES, M. D.

NATURAL ORDER.—According to Linn. Syst., *Solanaceæ.* Sex. Syst. This plant belongs to class Pentandria, and to order, Monagynia.

DESCRIPTION.—*Generic Character.*—Corol, wheel-form: berry juiceless, inflated: anthers converging: Calyx angular.

SPECIFIC CHARACTER.—Color of the corol is often described as white, yet is somewhat variegated, being a little inclined to green, and also yellowish. Flowers make their appearance in Aug. Annual. Stem herbaceous: peduncles solitary. Capsule oblong, when ripe deep red, very pungent. Seeds whitish, numerous, reniform.

Habitat.—Authors are not agreed on this subject; it is maintained by some, that the ancients were acquainted with this agent. Dr. Stille says that it was first known in Europe early in the 16th century, and that it was brought thither from the then newly discovered Western World. Dr. Pereira limits its habitat to Sierra Leone. Mr. Horner, as quoted by Dr. P. maintains that none is imported from the East or West Indies, as stated in the pharmacopœia. Dr. Waring makes it a native of the Tropics generally, and says that it is imported from the coast of Guinea and the East and West Indies. Thomas Green, editor of the Universal Herbal, says most of the plants of this genus are natives of both the Indies, but they have been principally imported from America into Europe. He remarks, that they abound in all the Carribbean islands. Dr. King asserts that several species of capsicum are indigenous to the East and West Indies, and most hot climates throughout the globe. It is at present a native plant of South America.

Different Species.—Mr. Long informs us that there are fifteen varieties of the Capsicum Annuum cultivated in Jamaica. Mr. T. Green has described five species in the botanical dictionary. 1. C.—Annuum; 2. C.—Baccatum; 3. C.—Sinense, which is perennial, woody, with an ash-colored bark. Native of China; cultivated in Martinico, and used there for culinary purposes. 4. C.—Grossum; this is also said to be perennial. 5. C.—Frutescens.

Medical Properties and Action.—This remedy is regarded by many physicians as a pure and powerful stimulant. Dr. Waring remarks:

"The berry or fruit (off.) is an acrid stimulant. In small medicinal doses, it causes a sensation of warmth in the stomach, promotes the digestive process, and stimulates the genito-urinary organs. In excessive doses it is an irritant poison. Externally applied it is rubefacient. Its activity depends upon a volatile principle, Capsicine, which Pereira states is so powerful an irritant, that half a grain of it, volatalized in a large room, causes all who inspire it to cough and sneeze. Capsicum may be given internally in powder or in tincture. The tincture is a good adjunct to the oil of turpentine."

The stimulant action of capsicum upon the urinary apparatus entitles it to be ranked among the *aphrodisiacs.* Capsicine is a thick liquid, of a yellowish-red or reddish-brown color, which becomes very fluid when heated, and, at a higher temperature, is dissipated in fumes. By exposure to air and light it solidifies. It is decolorized by chlorine. It is slightly soluble in water and in vinegar; but very much so in alcohol, ether, oil of turpentine, and the caustic alkalies. (Pereira.)

USES.—*Scarlatina.*—The following formula originally proposed by Dr. Stephens, (Med. Commentaries vol. ii.) and quoted by Dr. Waring, has been used with much success, particularly in that form of the disease which occurs in the West Indies. (W:) Take two tablespoonfuls of capsicum and two teaspoonfuls of salt; beat them into a paste, and add half a pint of boiling water. When cold, strain, and add half a pint of vinegar. Of this mixture, the dose for an adult is one tablespoonsful every four hours. The quantity is to be diminished for children, according to age or the severity of the attack.

The same formula forms an excellent gargle in the sore throat which accompanies the disease. It is reported that Mr. Stephens gave it to four hundred patients laboring under this disease, and it seemed to save some whose state had been thought desperate. Kreysig, Headley, Currie, and others, as quoted by Dr. Stille, employed the same, or a similar preparation, in malignant sore throat of scarlet fever. Dr. S. observes: "As children are seldom able to use it in the form of a gargle, the infusion or the tincture of capsicum may be applied to their throats by means of a piece of sponge attached to an appropriate handle."

CYNANCHE MALIGNA.—Dr. Waring recommends in putrid sore throat, m. xxx of tincture of capsicum added to O ss. of port wine; he says that it forms an excellent stimulating gargle; and that it will produce as much effect thus employed as three times the quantity of capsicum in a less stimulating vehicle. Dr. Pereira says: administered internally, capsicum has long been esteemed in cases of cynanche maligna. In the asthenic forms of the disease, capsicum should be administered in conjunction with quinine and brandy. It may be used with advantage, in some instances as a gargle.

DELIRIUM TREMENS.—This disease has been treated very variously at different epochs. Bloodletting, cupping, application of leeches, cold affusion, large doses of calomel, emetics, tartar emetic in nauseating doses, alcohol, opium, camphor, terebinthinates, digitalis, inhalation of chloroform, and many other agents have had their advocates. Many of these remedies, as medical science has progressed, have been abandoned as not only useless, but positively injurious. Very opposite means of cure have been resorted to in this disease, and perhaps in some cases very justly. Some agents may be suited to particular cases, and not to others. Capsicum has been administered by some, with the most happy results. The Lancet, March 15, 1862, p. 287, as quoted by Braithwaite, No. 45, p. 53, remarks as follows:

CAPSICUM IN DELIRIUM TREMENS.—By Chas. Ferneley, Esq.. Grantham.—[Mr. Ferneley's attention was first directed to this treatment of delirium tremens by Dr. Foss, principal officer of the garrison at Cork.] He says: "I have used it on several occasions, both in public and private practice with success, its administration having almost invariably been followed by more healthy perspiration, and refreshing sleep, from which the patient has awoke quiet and relieved from the nervous excitement. The way that I have used it has been in the form of punch, first making a moderately strong infusion, two scruples of cayenne pepper to a pint of boiling water, straining it when cool, and adding sugar and citric acid to suit the taste. It is very palatable, and will be taken by the patient *ad libitum.*" Those who advocate the opium or alcoholic treatment, might, doubtless often, derive much benefit by the addition of capsicum. There would appear to be some reason why it should be combined in certain cases with digitalis. Cannibis indica I have known to quiet the patient in this disease, in cases where opium had been thoroughly tried, and failed. In some instances, the use of cannabis indica might be very advantageously combined with capsicum.

The January number of Braithwaite, of 1867, contains valuable information on this subject, by Dr. Lyons, Richmond Hospital, Dublin. The paper was published in the Medical Press and Circular, April 18, 1866, p. 395. The patient, whose treatment is here reported, was a man 40 years of age.

Report of the Case.—"When seen on the 25th of March, he presented the well marked phenomena of delirium tremens, and for many days and nights had had no sleep.

Dr. Lyons having, on more than one occasion, previously employed with success, the treatment by capsicum specially recommended to his notice by his friend Dr. Kinnear, Director of the Melville Royal Naval Hospital, Portsmouth, determined to give it a further trial in this case, in which, for various reasons, it appeared to be indicated, and ordered the patient thirty grains of the powder of capsicum, to be made into a bolus, and administered immediately. The dose was taken without any difficulty, notwithstanding that some slight burning sensations were felt in the mouth and throat for a time, and a sense of diffused warmth through the stomach and bowels for a brief period subsequently.

In less than one hour after the bolus was taken he fell into a quiet sleep, and some three or four hours subsequently awoke, perfectly calm, conscious and convalescent. It is much to be regretted that notwithstanding he was perfectly reasonable, and in all respects quite free from any symptoms whatever of the condition of delirium tremens, a draught, containing 30 minims of gutta nigra, was administered about 10 A. M., this medicine having been ordered in the morning to provide for the possible failure of the capsicum dose; but of the efficacy and satisfactory results of the former no reasonable doubt can remain. No stimulants were employed at any time in this case. Convalescence was rapidly established, and the man left the hospital in a day or two, himself and his wife in no little degree surprised at the almost magical effect produced by the dose of so familiar an article as that employed."

"The results obtained by Dr. Lyons, in the use of this drug fully bear out the experience acquired on a far larger scale of observation in the West Indies and in the Melville Hospital, by Dr. Kinnear, Dr. Lawson and others of his distinguished colleagues in the public service at home and abroad. In the records of the Melville Hospital not less than seventy to eighty cases are reported to have been successfully treated by the sole use of this drug in single or repeated doses, ranging from one scruple upwards. No gastric disturbance or other unpleasant symptom has been at any time noticed. As a stimulant of great and immediate efficacy, Dr. Lyons considers that its action may be explained by the direct influence it exerts upon the gastric expansions of the vagi, and so indirectly upon the cerebro-spinal centers. The phenomena of the disease he considers to point to a double condition of stimulated excitation and partial paralysis of distinct and perhaps opposite portions of the nervous system."

"For general employment it cannot be doubted that, as pointed out by Dr. Lyons, the use of capsicum offers many advantages over either opium or digitalis. In cases of recurrent delirium tremens, associated as they often are, at a somewhat advanced period of life, with fatty degeneration of the heart, both the latter drugs are very distinctly contra-indicated, and their use has not unfrequently been attended with results far from satisfactory even when free from fatal results, which has not always been the case."

HÆMORRHOIDS.—In the College Journal of January, 1856, No. 1, p. 30, capsicum is noticed for the relief of hæmorrhoids, as follows: "In several of the Continental journals, small doses of capsicum have been recommended, to be administered internally as a cure for piles. In view of this fact, Dr. C. E. Buckingham, of Boston, has been led to recommend a pickled, unripe capsicum pepper as an article of diet with the dinner. He says such has been his practice for years, and with satisfactory results. The writer of this abstract has prescribed the oil of capsicum rubbed up with sugar of milk, so as to give the tenth of a drop at a dose, several times a day, and his patients have experienced great relief from this troublesome complaint."

Dr. Stille, in his excellent work on Therapeutics and Materia Medica, refers to Dr. Buckingham's statements relative to the use of this agent in hæmorrhoids, and mentions that it has been proposed as a means of curing this malady by M. Allegre, and according to a report made to the Academy of Medicine, with much success. It will be found advantageous to give capsicum in combination with the usual remedies prescribed for this affection, such as acidum tannicum, gallæ, acidum nitricum, millefolium, stramonium, sulphur, rheum, &c., &c. The agent has been too much neglected by the profession, perhaps on account of its indiscriminate and vaunted use by a pseudo class of physicians, in whose hands many valuable remedies have been potent for evil. It now comes into favorable notice, from men eminent in the profession, as an agent competent to cure one of the most harrassing diseases that afflicts our race.

UTERINE HÆMORRHAGE.—*By Dr. Brock*—Dr. B. appears to have entertained a very exalted opinion of this remedy, as he requested his executors to publish the following notice in the various medical journals:

"Ample experience having taught me the great value of capsicum in uterine hæmorrhage, in doses of from five to ten grains, every ten minutes, until the hæmorrhage ceases, I consider it my imperative duty to record my testimony to the effects of this remedy, which is not appreciated by the medical profession in proportion to its worth.—*Braithwaite, part* 30, *p.* 206.

Dr. King observes that this remedy has been used in passive hæmorrhages, especially uterine, and when combined with the compound powder of ipecacuanha, will in many instances, arrest hæmorrhage after parturition, promptly. The medical properties of this agent do not appear exactly settled; some regard it as a pure stimulant, others as a pure irritant, and a class of physicians regard it as possessing some property in addition, not yet well defined.

INTERMITTENT FEVER.—It has been very justly remarked by Dr. Stille, that several writers state that capsicum has been successfully given in intermittent fevers. Bergius, as quoted by Dr.

S., prescribed it for this disease, in substance, and conjoined with laurel berries, and he declares that he frequently saw intermittent fevers cured by its means, and generally without relapses.—Mat. Med., 1, 144.

Mr. Collins and Nieman are also reported as having employed it with advantage. Dr. S. says that it forms an excellent adjuvant to quinia in this disease, when the stomach is feeble and the digestion imperfect. The Medical Botany, vol. I, edited by Gilbert T. Burnet, F. L. S., &c., Professor of Botany in King's College, London, and President of the Westminster Medical Society, contains the following remarks relative to the properties and uses of capsicum: "Capsicum is a powerful stimulant, and is most advantageously given in atonic gout, in palsy, tympanites, dropsy, and in the debilitated stages of fever. From five to ten grains, in a pill, is the usual mode of administration; and although it is the hottest of all the peppers, it has but little tendency to affect the head; it is therefore a useful stimulant in dyspepsia, and is an admirable carminative for flatulency from vegetable food. It may be advantageously combined with steel in scrofulous constitutions, and is much used as an adjunct to cinchona bark for intermittents. Its sensible effects are heat in the stomach, and a general glow all over the body, without much affecting the pulse; and as a gargle it cleans, without impeding the healing of the ulcers of the fauces. A weak infusion is a useful stimulant to scrofulous and fistulous ulcerations."

Copland, in mentioning various stimulating, aromatic, and tonic vegetables in conjunction with bark or quinine, alludes to capsicum as an adjuvant in the treatment of intermittent fever.* The extract of belladonna has been administered with bark and other tonics, frequently with evident advantage, by adding a few grains of capsicum to the dose, the same amount will have a more speedy and durable result. This agent will be found a very valuable adjunct to most of the tonics usually employed, in the treatment of intermittents. Dr. W. C. Bakes says, at the request of a physician, he has been induced to prepare an extract from capsicum. He prepared it from the following formula:

Take of

Powdered Capsicum	- - - - -	8 ozs.
Dilute Alcohol,	- - - - -	1½ pt.

Moisten the capsicum with a sufficient quantity of the dilute alcohol, and set the mixture aside in a close vessel, to macerate, for six days;† then place it in a percolator and pour dilute alco-

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*Vol. 1, p. 1097.
† American Journal of Pharmacy, Vol. 25, p. 513.

hol on it until four pints have been obtained, and evaporate by means of a water bath to the consistence of an extract. Dr. B. says that he has found eight ounces of the powder to yield two ounces of extract. He represents the extract as very powerful, and observes, that when a small quantity is placed on the tongue, it produces an insupportable burning sensation immediately; and if left too long, will act as an epispastic. He observes that it has been used with success, combined with quinine, in cases of intermittent fever, occasioned by the two frequent are of ardent spirits. Probably Dr. Bakes intended to convey the fact that patients, addicted to the too frequent use of ardent spirits, when attacked with intermittent fever, were treated successfully with quinine and capsicum combined. The too frequent use of ardent spirits, *per se*, never is the cause of intermittent fever.

ATONIC DYSPEPSIA.—Dr. Stille observes "that capsicum is a very useful gastric stimulant in enfeebled, languid, and torpid conditions of the stomach. Thus in the dyspepsia of drunkards, as well as of gouty subjects, it has been found useful. In various diseases, attended with diminished susceptibility of the stomach, capsicum is an exceedingly useful adjunct to other powerful remedies, the operation of which it promotes by raising the dormant susceptibility of this viscus; as in cholera, intermittents, low forms of fever, and dropsies." (P.)

Waring says, in atonic dyspepsia, especially that occurring in hard drinkers, and in that of persons who have long been resident in hot climates, capsicum is a very eligible stimulant and stomachic.

YELLOW FEVER.—Dr. Wright as quoted by Waring, speaks in high terms of capsicum, given internally, as a means of obviating the black vomit. Dr. W. is also quoted by Pereira in his allusion to this subject.

DIARRHŒA.—In diarrhœa arising from putrid matters in the intestines, and especially when it is occasioned by fish, Dr. Copland regards capsicum as almost a specific.‡

SEA SICKNESS.—Capsicum has also been used advantageously for this malady in the dose of a teaspoonful, given in some convenient vehicle, on the first occurrence of nausea.

CHILBLAINS.—On the use of capsicum as a remedy for chilblains, by Dr. A. Turnbull, see *Braithwaite's*, part 21, p. 262. "My plan of treatment (says Dr. Turnbull), is simply to saturate a piece of sponge or flannel with the concentrated tincture of capsicum, and to rub well over the seat of chilblains, until such times as a strong tingling and electrical feeling is produced.

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‡ Dict. Pract. Med. Vol. 1, p. 528.

This medicine possesses an extraordinary power in removing congestion by its action upon the nerves and circulation. This application ought to be continued daily until the disease is removed. Relief will be experienced on the very first application, and frequently there will be a total removal of the disease after the second or third. This of course depends upon the severity of the case. This embrocation when rubbed never produces excoriation, if the skin is not broken. Dr. King makes favorable mention of the use and efficacy of this agent in the treatment of this harrassing complaint. In relation to its external use and power in removing congestion, &c., Dr. K.'s opinion is in unison with what has been stated.

TOOTHACHE.—The manner of using capsicum for toothache, (says Dr. Turnbull,) is by putting a drop or two of the tincture on cotton, and applying it to the part affected, the relief will be immediate.§

ADMINISTRATION.

Fluid Extract, - - -	Dose, 5 to 15 drops.
Pills, 1 gr. each, - - -	" 1 to 2.

TINCTURE OF CAYENNE PEPPER.

Fluid Extract, - - - - - -	1 ounce.
Diluted Alcohol, - - - - -	1 pint.

DOSE.—One to two drachms. Used in low states of fever with gastic insensibility. Also, when diluted, as a gargle.

INFUSION OF CAYENNE PEPPER.

Fluid Extract, - - - - - -	½ ounce.
Boiling Water, - - - - - -	1 pint.

DOSE.—Two to four drachms.

GARGLE OF CAYENNE PEPPER.

Fluid Extract, - - - - -	1 ounce.
Common Salt, - - - - - -	1 drachm.
Boiling Vinegar, - - - - -	1 pint.
Boiling Water, - - - - - -	1 pint.

Used as a gargle in bad cases of scarlatina.

SYRUP OF CAYENNE PEPPER.

Fluid Extract, - - - - - -	½ ounce.
Syrup, - - - - - - -	8 ounces.

DOSE.—One to two drachms.

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§ Braithwaite's, part 21, p. 263.

International Medical Congress.

PARIS, August 27, 1867.

The International Medical Congress met in this city on Friday, the 16th of August, at two o'clock in the afternoon, and my credentials from the Kentucky Medical Society gained me a ready admittance in the august assembly. Much interest had been excited all through Europe and our country whilst arrangements were in progress for the novel gathering, and the committee in Paris had been indefatigable in their exertions to secure success for the enterprise, appealing not only to their professional brethren in France, but also to foreign medical societies, journals and men of eminence for their support. I found the Congress assembled in the amphitheatre of the Faculty of Medicine, which had been adorned for the occasion, and among other decorations, contained the flags of various nations elegantly intermingled. It is computed that there were not less than fifteen hundred persons congregated in the ancient amphitheatre that day, but I confess that when I entered there did not seem to me to be more than one-third that number in attendance. With all its decorations the room was very warm and wretchedly ventilated. As a body, I could not help remarking at first sight, that the Congress was far inferior in appearance to the British Medical Association which I had just seen sitting in Dublin.

The inaugural address was delivered by Prof. Bouillaud, who was received by the Congress with universal applause. He referred to the assembling of so many medical men from all parts of the world as an unmistakable proof of the progress of civilization, and a visible manifestation of the friendly feelings which animated the members of our profession. It was formerly said that the Pyrénees existed no longer; it might now be said that all boundaries between nations had ceased to exist, except the line which separates barbarism from civilization. He then proceeded to relate how the idea of an internal national assemblage first originated, how the government assisted it, how it was favored by the press and the leading medical men of France, and concluded this part of his discourse with the remark that Paris alone is the proper place for such a meeting; for, as the poet said, *Paris is France, and France is the world.* Whether my American brethren present assented to this sweeping declaration, or how it was received by my Prussian friends who sat listening, I have no means of ascertaining; but I heard no expression of dissent from it. At the close of his address, Prof. Bouillaud offered to vacate the chair, in order to permit the assembly to nominate its President, but was maintained in his functions by universal acclamation.

Official representatives of their governments were sent to the Congress by Prussia, Bavaria, Belgium, Portugal and France, among whom were Ferichs, of Berlin, and Denouvilliers, of Paris, names known to all readers of medicine. A great number of scientific societies, both French and foreign, are represented in the learned body.

The first subject proposed by the President for discussion was morbid anatomy of tubercle, which elicited many able communications and an endless variety of opinions. Dr. Villemin, who read the first paper, retracts a former opinion, that tubercle is implanted in the epithelium of the lung, and now believes that its seat is the intervesicular connective tissue. He considers tuberculosis as one great morbid unity, and the inoculability of tubercle establishes, in his opinion, a close connection between consumption, syphilis and glanders. The three diseases though not identical are, he thinks, of the same family. Dr. Sangalli, in a paper read by Dr. Jacoodid, contends that tubercle is of an inflammatory nature. Prof. Lebert presented a paper in which he stated that he had produced tubercle in the lungs by injecting pus into the veins. Dr. Herard considers the grey granulations as the type of tubercle; the consecutive alterations he holds to be of an inflammatory character. Dr. Mongeot regards the granulation of the lungs as a disease entirely different from tubercle. As to the whole question, the impression left upon the mind after hearing all the statements of the several speakers is, that no too micrographers agree fully on the subject, and that consequently science has not yet rendered her final verdict upon it.

In the midst of this discussion, Dr. Van Lohe, a Dutch physician, rose and said that the Congress did not appear to him to be an international meeting, since, instead of discussing the interests of the profession, it was entirely taken up with the reading of scientific papers. He was disposed to unfold his views at length, but was prevailed upon by the courteous President to withhold them for the time being and suffer the discussion to go on.

A debate arose on the second day of the session between M. Bouchat and M. Galezowski, both laying claims to the credit of having first applied the ophthalmoscope to the discovery of cerebral and spinal diseases. Bouchat was surprised at nothing in the elaborate memoir read by Galezowski but the absence of any acknowledgement of his contribution to the subject. He had investigated the question in all its bearings long before Galezowski had bestowed a single moment's attention upon it. Galezowski, on the other hand, asserts that *his* investigation of basilar tuberculous meningitis, by means of the ophthalmoscope, with which he made Bouchat acquainted, had led this gentleman to pursue the researches in which he had been successfully engaged on the subject. The feelings of the Congress appeared to be on the side of the Frenchman, for he was loudly applauded by the members when he conducted his remarks in reply to M. Galezowski.

Several papers were read on the treatment of pulmonary consumption. Dr. Gourdin had tried injections of nitrate of silver into the trachea, without any satisfactory results. Dr. Marchal was convinced that iron, sulphur, and iodine were highly injurious to consumptives, especially the last, and that they hastened the fatal termination of their disease. His reliance is upon climate and a proper hygiene. Dr. Lombard approved of the views of Dr. Marchal, and gave some interesting facts illustrative of the effect of altitude in developing consumption. He stated that in the elevated parts of Switzerland, phthisis was unknown. The smaller quantity of oxygen inhaled is the influence to which he attributes this exemption. Dr. Auzias Turenne extolled the virtues of garlic in the hacking cough which usually attends consumption. M. Linas, of the Gazette Hebdomadaire, raised considerable merriment in the grave body by his witty remarks on M. Turenne's suggestions, but acknowledged that garlic, after all, was useful in catarrhal bronchitis, and might do good in phthisis. Dr. O'Leary declared that iodine, disseminated in the atmosphere of a room, so as not to irritate the lungs, was in his opinion, one of the best methods of treatment in consumption.

At this point of the discussion Dr. Van Lohe was requested by the President to explain his views in respect to medical organization. He complained of the restrictions upon the practice of physic, and expressed a wish that a physician, having once taken his degree, should be at liberty to practice in all countries. Upon this Prof. Palasciano remarked, that the legal status of the profession in Italy had been vastly improved since that had become a free country. Physicians were no longer prevented from receiving legacies from their patients, as they are in France; their widows were entitled to a government pension when they fell victims to their humanity in epidemical visitations; and finally, that they were dispensed from the painful duty of informing against their patients when they come upon traces of a crime—a duty which in most countries of Europe, and even in France, was laid upon the medical adviser.

This last remark brought the President and Dr. Revillout to their feet, who successively rose to protest against the assertion. Even if the law had attempted to compel the French physician to denounce his patient, his sense of honor, they asserted, would always compel him to disobey the law. Prof. Crocq followed in some remarks on the law in Belgium with regard to the medical profession, and expressed a wish that some future Congress should meet with reference to reform in European legislation on the subject. Here the President arose and declared that he could not allow this discussion, however interesting, to go on. The subject was not in the programme; and, besides, such questions could not be discussed in France without the permission of the government—a permission which, if asked, would unquestionably have been refused.

On the third day of the meeting, the discussion on tuberculosis was renewed, and many important memoirs were read. M. Empis claimed to have been the first to describe *granulitis* as a distinct malady. M. Cornil, in an able communication insisted that the grey granulations were the only true tubercles, and that the process was essentially inflammatory. M. Seco Y Valdor, Spanish physician, related instances where tuberculous disease had obviously been contagious between married couples. In Spain, he said, they possessed two invaluable *sanatoriæ* for phthisical patients—Malaga and Pentecosta, the latter situated on a mountain 8500 feet high, and thus combining the advantages of altitude with saline waters, for which it is celebrated. In a paper sent by Dr. Bowditch on consumption in Massachusetts, the author states that the disease prevails in damp situations, and is not found where the climate is dry. M. Dropsy, of Cracow, remarked that he practiced in a country where the soil is fertile and the atmosphere pure; and while the peasants are in general free from tuberculosis, the Jews who are poor and never eat meat, are cruelly afflicted with phthisis, showing that other hygienic conditions must be taken into account along with climate. M. Jaccoud read a paper for M. Homan, on tuberculous disease in Norway, in which it is insisted that the influence of climate is even less than that of other hygienic elements.

On the fourth day M. Pantalieni, of Rome, after a paper had been read by M. Bole on remittent fever, spoke of the fevers, which prevail in the Eternal City and almost all over Italy, in which two forms are presented—the gastric, which is free from danger, and the nervous, corresponding to putrid, ataxic fever. In all alike, sulphate of quinine, which he gave in heroic doses, was the sovereign remedy. Prof. Giovanni Polli followed with a paper on the treatment of diseases due to a morbid ferment by the sulphites and hyposulphites of magnesia and soda. He could vouch for the efficacy of these remedies in typhoid, puerperal, and malarial fevers, which result from ferments in the blood, and in intermittent fever he had found their good effects equal, if not superior, to sulphate of quinine. Other practitioners had also tried them with success. Prof. Crocq was not so enthusiastic about these remedies as Prof. Polli. In the first place, he was not sure of the existence of these ferments in the system—it was a mere hypothesis; but in the next place, if they really existed in the blood, it was by no means certain that they could be destroyed by the remedies proposed. As to intermittents, he thought it quite unnecessary to look for a substitute for quinine. Prof. Polli answered that the facts in favor of his remedies were so conclusive that he must persist in his opinion, and that he would await with a tranquil mind the triumph of this new medication. M. Crocq proposed as a remedy for albuminous nephritis, in the two first stages of the disease (those of congestion and exudation,) iodine in very large doses. He begins with two or three grammes a day, increasing the dose till it reaches ten, fifteen, or even twenty grammes. Tolerance was easily obtained, and he had never observed any inconvenience from these doses, which were not necessary in all cases. A paper was read by M. Lallement, on the treatment of typhoid fever, in which he rejected all the remedies usually given internally, emetics, purgations, quinine, etc., and advocated successive bleedings, according to the method of M. Bouillaud.

The proceedings of the evening were pleasingly terminated by the exhibition of a dog and a cat illuminated *a giorno*. Merchiliot, of Kew, hopes, by this new process of pathological investigation, to be able to diagnosticate more accurately tumors of the viscera, and other morbid alterations of the stomach, intestines, bladder, etc. The method consists in introducing electric light into the interior of the body, by tubes, through the œsophagus, anus, vagina, etc., and the process was suggested by the stomatoscope of Prof. Foussagrieves, of Montpelier, invented for the investigation of diseases in the interior of the mouth. The author thinks that the whole human body, within and without, may be rendered transparent by means of his apparatus when it shall have been carried to greater perfection.

In a former letter I announced that syphilisation was dead. I had never expected to refer to the subject again, but it has been revived in the International Medical Congress. Up to August 22d, the seventh day of the session, the proceedings had been quiet, and, many thought rather frigid and uninteresting, but the introduction of this topic on that day raised a storm in the learned body which reminded Parisians of the debate of the National Assembly in 1848. Dr. Auzias Turenne, whose recommendation of garlic in consumption had excited so much merriment, read a paper in which he asserted that *syphilisation is the only real preservative against syphilis!* The repeated inoculation of chancre, he said, extinguishes at last all susceptibility to the disease; and a prostitute who has been syphilised is no longer able to communicate syphilis; so that a certificate from a medical man establishing that a girl had been inoculated ought to save her from future medical visitations. In this manner, he held, it would be easy to extinguish all centres of venereal infection in a short space of time, and the Congress ought to interfere in order to restore to syphilisation its proper place in the prophylaxy of the disorder. Dr. Ricord, the great master on all points pertaining to syphilis, rose and said that he had many a time proposed to Dr. Auzias Turenne to prove his sincerity by *inoculating himself*—a result, he added, which it has been impossssble to obtain. And yet, continued Dr. Ricord, when I sought to prove that chancre could be inoculated, I tried the experiment on myself. Dr. Turenne replied that syphilisation must follow the line of all scientific questions; he did not feel himself called upon to make experiments on his own person. Dr. Ricord remarked that syphilisation grew out of the idea of *unicity*, or the existence of a single venereal virus. But there is a fundamental distinction between hard and soft chancre. The latter is a local accident, the former an infectious sore, which gives rise to constitutional troubles. Dr. Auzias doubted the reality of the distinction, but if true it did not impugn syphilisation. Vaccine lymph preserves from small-pox, and yet the two diseases are not identical. Dr. Ricord said that if soft chancre really corresponded to vaccine virus as a preservative from venereal disease, Dr. Auzias Turenne would deserve the statue as the Jenner of syphilis. But if such is his conviction, why will he not make the experiment upon himself? Surely, he added, a sufficient number of unfortunate patients have sacrificed their health and lives to the doctrine of syphilisation.

At this moment a tall grey-headed man stood up and exclaimed: "I am a physician; I am syphilised, and my health is excellent." Upon which another member cried out, "why does not Dr. Auzias Turenne follow your example?" "I," replied the grey-headed member, "have given up all thoughts of marriage. He, perhaps, has not." Prof. Broeg proposed that the discussion should be closed. "And I expected," said he, "to propose to the Belgian Government to syphilise all the inhabitants of the country in order to preserve them from syphilis." But it was decided by the Congress that the discussion should proceed, and Dr. Auzias made an elaborate defence of his pet practice, citing in its favor the authority of Guerault, Melchoir, Robert, Sirus, Colin, Baron Percy, Graves, and Simpson, and resumed his seat amidst loud and prolonged applause. The Secretary-General, Dr. Jacoud, made a powerful reply to Dr. Auzias. He said a radical line of distinction should be drawn between preventive and curative syphilisation. The Norwegian physicians employ the latter, attempting to cure syphilis by repeated inoculations, and sometimes with satisfactory results. But what shall we say of preventive syphilisation? By this method we inoculate a subject free from syphilis in order to preserve him in future. But the results show the futility of the procedure. A patient who had been inoculated with soft chancre two hundred and seventy-five times was, some weeks later, inoculated with hard chancre, and became infected with constitutional syphilis. In a word, said Dr. Jacoud, curative syphilisation is a dangerous method of treatment, and preventive syphilisation is a fable.

The debate was continued by Dr. Palasciano, who said that syphilisation after having been favorably received in Italy, was now almost entirely abandoned, even by Dr. Sperine himself, who only now employs it in certain cases of tertiary syphilis. Dr. Ricord said that he had always felt the utmost abhorrence for the practice, and that when it was proposed to inoculate boys at school ——. To which Dr. Auzias Turenne interrupting him, exclaimed, "Never!" Ricord responded, the fact is certain, and the reports of the Academy prove it. "Then did I call upon Dr. Auzias Turenne to prove his sincerity by inoculating himself, but he constantly refused." Dr. Ricord had never seen a case of syphilis cured by inoculation, but he had seen the most terrible accidents, and even death follow it. He recalled the melancholy case of Jailly, a law student, who died in consequence of the inoculations performed on his person.

Dr. Auzias responded that Jailly died, not from syphilisation, but from erysipelas. To which Dr. Ricord, boiling with indignation, replied: "I solemnly affirm (*je le jure*) that I saw Jailly before his death, and that he died from the results of inoculation.

Here a perfect tempest of feeling and noise arose which President Bouilloud found it almost impossible to allay. At last silence being restored, Dr. Hinton fortified Dr. Ricord by the history of a case of syphilisation which proceeded rapidly to a fatal termination; and the violent discussion having at length been brought to a close, a commission was nominated, at the suggestion of Prof. Behier, and the meeting separated at a very late hour. So the last of syphilisation is not yet. It dies hard. Possibly the report of this commission may prove its extinguisher.

L. P. Y., Jr.

Health of New Orleans.

[Owing to our illness we are behind in our issue, which enables us to insert the following extracts, which are of so much interest to our readers:]

From the New Orleans Medical and Surgical Journal.

The absorbing topic of professional interest, throughout the South-west, during the present season, is the epidemic of Yellow Fever, and we should not do justice to our patrons in this portion of the country, nor to more distant readers, to ignore it at this time. The malady is still prevailing, and it is of course impossible now to take a complete view of its progress; this must be reserved for a future issue. For the present we shall speak only of its most striking characteristics, and of its progress since the publication of the last number.

Each manifestation of an epidemic disease presents individual traits, to distinguish it from others of the same malady; and the yellow fever of 1867 will be long remembered for its well marked peculiarities. We have before spoken of the early appearance of sporadic cases, and its late establishment in an epidemic form. The mildness of the type generally prevalent here was alluded to, as well as its inclusion of negroes among its subjects. To a confirmation of these traits it may now be added that this epidemic of the fever is the most sweeping one ever known in the history of our city. No class of the population can this year claim or expect exemption from its ravages. It was generally supposed that natives of the city enjoyed an immunity, and that those born and raised in the vicinity possessed it in proportion to their contiguity. It was also believed that one attack was a fair guarantee against all future danger from the fever. This year it has violated all these precedents most incontestibly, and in numerous instances. Infants at the breast have appeared to be almost as susceptible to the infection as any other people, though most have experienced very light attacks; but bad cases have not been wanting, and, in the writer's practice lately, occurred a case of black vomit in an infant only one month old.

Secondary attacks, formerly considered rare exceptions, have this year been found numerous and well attested. Even some who were known to have the fever in 1853, have again had well marked attacks. It is to be remarked, however, that these secondary cases have been, almost without exception, tractable ones, and have terminated favorably. The absence of large numbers from the city during the war is supposed to have cost them the immunity previously acquired, and rendered them measurably susceptible again to the infection.

We are not aware that any new light has been thrown upon the vexed questions of contagion and portability, nor that its introduction from abroad has been established with any degree of credibility. The quarantine has been maintained throughout the epidemic, at the mouth of the river, and it is certain that, under the present system, it has proved inoperative to debar the disease. Whether any different system would be more efficacious is yet problematical, and it does not seem probable that the question will soon be decided.

The following table, based on official returns to the Board of Health and the municipal authorities, and borrowed from the *Crescent* newspaper, exhibits the daily mortality for September and October and meteorological observations for October. The mortality reports are compiled from the sexton's returns of interments at the several cemeteries, and include some individuals who died in the suburbs, but not those in the military service. These exceptions, however, do not materially affect the result.

It is to be observed that the figures for each day give the number of interments for the twenty-four hours ending at 6, A. M., of the same date:

DATE.		Yellow Fever.	Various diseases.	TOTAL.	DATE.		THERM'R.				WEATHER.	Yellow Fever.	Various diseases.	TOTAL.
							8 A. M.	1 P. M.	6 P. M.	MIDNIGHT.				
September	2....	26	27	53	October	2....	79	81	79	81	Changeable..........	54	38	92
..	3....	25	29	54	..	3....	81	85	82	82	Cloudy..............	56	41	97
..	4....	28	16	44	..	4....	81	79	80	77	Stormy..............	75	32	107
..	5....	44	23	6[illegible]	..	5....	79	84	82	74	Fair................	59	31	90
..	6....	30	24	54	..	6....	63	75	76	73	Changeable..........	60	37	97
..	7....	43	23	66	..	7....	73	75	74	74	Fair................	58	32	90
..	8....	49	17	66	..	8....	72	78	74	73	Very fair...........	50	26	76
..	9....	51	26	78	..	9....	71	81	77	76	Very fair...........	64	34	98
..	10....	42	18	60	..	10....	74	78	76	72	Very fair...........	56	46	102
..	11....	68	18	86	..	11....	76	79	78	72	Very fair...........	49	34	83
..	12....	61	28	89	..	12....	69	76	75	78	Very fair...........	46	42	88
..	13....	43	21	64	..	13....	60	69	68	65	Very fair...........	32	29	61
..	14....	41	22	63	..	14....	62	73	70	66	Very fair...........	33	25	58
..	15....	53	27	80	..	15....	66	75	73	68	Very fair...........	39	22	61
..	16....	50	30	80	..	16....	64	..	76	73	Very fair...........	28	23	51
..	17....	68	34	102	..	17....	65	79	76	71	Very fair...........	31	24	55
..	18....	46	24	70	..	18....	68	..	..	..	Very fair...........	34	25	59
..	19....	55	37	92	..	19....	67	79	75	79	Very fair...........	35	32	67
..	20....	66	25	91	..	20....	68	76	76	72	Very fair...........	35	25	60
..	21....	64	32	96	..	21....	70	81	79	73	Very fair...........	31	22	53
..	22....	69	44	113	..	22....	70	82	79	74	Very fair...........	13	22	35
..	23....	77	35	112	..	23....	67	70	72	69	Very fair...........	18	31	50
..	24....	82	51	133	..	24....	63	75	73	71	Changeable..........	19	28	47
..	25....	68	33	101	..	25....	69	76	72	71	Changeable..........	17	21	38
..	26....	57	28	185	..	26....	71	72	72	70	Very rainy..........	12	16	28
..	27....	77	30	107	..	27....	67	68	66	64	Rainy...............	10	21	31
..	28....	67	36	103	..	28....	64	66	61	..	Cloudy..............	16	23	39
..	29....	61	32	93	..	29....	58	68	66	64	Very fair...........	11	26	37
..	30....	64	32	96	..	30....	61	68	65	57	Very fair...........	9	23	32
	.....	..	..	....	..	31....	52	..	..	..	....	13	18	31
October	1....	63	34	97	November	1....	56	..	..	..	....	9	20	29

As in former epidemics, the HOWARD ASSOCIATION have been active in their mission, to relieve the wants of the sick and destitute, and the gratitude of this impoverised community is due those Northern friends who have, with free hand and open purse, promoted the efforts of our self-sacrificing citizens. The Medical profession have freely responded to all demands for their services, and the means at the disposal of the Association have enabled them to supply medicines and subsistence wherever they were required. The writer can testify, from personal observation, to the immeasurable benefits of these well-directed efforts.

At this date (1st Nov.) and while the days of the present visitation of yellow fever can almost be numbered, another not less dreadful destroyer seems desirous, to renew its ravages. Last year the cholera was predominant—for a short time almst epidemic—while the fever modestly stood in the background; but its blows, though few, were severely felt. This year the cholera early presented a threatening aspect, but had the courtesy, in its turn, to yield precedence to its old rival, and for weeks was scarcely heard or thought of. Now that the fever is about ready to withdraw from our midst, whether from want of subjects or before the advance of its invincible frosty foe, the cholera has quite lately knocked at our doors and called several victims to the "undiscovered country" beyond the portals of "the silent halls of death."

What may be the purport or event of this menace, lies not in human wisdom either to predict or to control. Much may be done by way of hygienic precaution, much by sanitary regulations, but the spell is not put down at human bidding, and its mystery is still unsolved.

Dr. Sims in Paris.

Mr. Sampson Gamgee, one of the ablest British surgeons, and who is now visiting the French capital, is contributing to the Lancet a series of articles entitled "The Present State of Surgery in Paris." From the number found in the Lancet of September 7th, we find this reference to our justly eminent countryman, Dr. Marion Sims:

While on specialities, and before entering upon general surgery, I may relate the proceedings at a s' *ance* in the theatre of the Hospital Beaujon (August 30th,) when Dr. Marion Sims gave a demonstration of his methods, at the invitation of M. Richard. Among the large number present were Dr. Hingston, surgeon to the Hotel Dieu, Montreal; Prof. Pope, of St. Louis, U. S.; and Dr. Mazzoni, of Rome. Among the patients examined were several who had been operated on by Dr. Richard, to use Dr. Sims' expression, with the most perfect result. No case for actual operation presented itself that morning, but nevertheless the skillful manipulation was a most instructive one; and I beg to thank Dr. Marion Sims for the patience, candor and courtesy with which he answered all my questions.

For all examinations and operations on the vagina and uterus Dr. Sims uses the duck-bill speculum, and no other. He dislikes sunlight, and prefers light entering from one window directly at his back, to light entering the room from different quarters. The previous evacuation of the rectum greatly facilitates the use of the speculum. A table about four feet long, covered with a blanket, is preferable to a bed or couch for the patient to lie upon. The position is on the left side, body diagonally to the table, so that the buttock rests on the left of the angle next to the operator and the window. The spine straight with the head, which may be raised very slightly if more agreeable; not so the shoulders, for the chest must lie prone, and as flat as possible on the table; neither of the arms under the chest, but well apart. The thighs to be bent at right angles to the trunk; legs at similar angle, an assistant raising the feet slightly. For this purpose a small table, a little higher than the one on which the patient lies, is handy to rest the legs upon. It is convenient to flex the right thigh a little more than the left, so as to bring the right heel just in front of the left ankle. In this position the epigastrium is on a lower level than the pelvis; and great importance is attached to the waist being free from all constriction, so that the abdominal viscera may gravitate freely forwards and downwards, and allow of the entrance of air into the vagina when the speculum is introduced. As already observed, this position is the invariable one for all inspections and operations. But one exception is made. When the patient has cancer of the womb, in order to avoid hæmorrhage or other accident from striking the cervix with the speculum, this is introduced while the patient is on her knees on a table, the chest prone and the back concave.

Before using the speculum, Dr. Marion Sims invariably ascertains the size, position and direction of the womb; and he does this, while the patient lies on her back, by left digital examination, palpation with the left hand above pubes serving to bring the uterus well within reach.

Whenever he introduces anything into the uterus, be it a sound or a tent, a syringe or a knife, he fixes the curvix with a tenaculum, after introducing the speculum, and is thereby enabled to ensure steadiness, and, when necessary, to draw down the neck of the womb into the vagina, and so direct it as to at once see into it. It is only when he so fixes and sees it clearly that he divides the cervix, thus making it an accurately surgical operation, and not merely a mechanical one. In operating for fistula, he always fixes the vaginal wall with a tenaculum before paring it or passing sutures.

Dr. Sims does not share the opinion of French surgeons that the climatic and general conditions of Paris are unfavorable to the healing of wounds. I have much pleasure in adding that, in examining the series of patients so liberally placed at his disposal by Dr. Richard, Dr. Marion Sims was no less skillful in his manipulations than he was careful for the feelings, mental as well as physical, of the poor women.

Yellow Fever, Storm, etc.

GALVESTON, Nov. 10, 1867.

The epidemic of Yellow Fever is now over and persons might come to the city with impunity if they did not now have to sleep in rooms where there had been cases, or on bedding that has not been well washed. We do not know of any new cases, and we have not seen a case in private practice for nearly three weeks.

The storm of the 4th and 5th, and again on the 10th and 12th did a great deal of damage to our wharves and shipping, but little to the city. We hardly know now that it occurred at all. It did not increase or decrease the cases of yellow fever, nor did it make any change in the type. We are expecting, for our next issue, a full account of it from the pen of Prof. Forshey.

Cholera is in New Orleans and at Havana, but not very bad at Havana, and we are now having some cases of diarrhœ and dysentery, and we look for cases of cholera as soon as immigration gets well under way. Do not forget to use disinfectants; sulphate of iron (copperas) is the best. Put it in privies, chamber pots, sinks, steamboat holds and floors, etc. Per manganate of potash, 1 grain to a gallon of water, put in cisterns will purify them. It will turn the water a little blue, but in twenty-four hours it will return to its natural color. It destroys all organic bodies. Never neglect the incipient diarrhœ, and have always on hand the following prescription:

R.

Chloroform.
Laudanum.
Aqua. Ammonia. aa. i oz.

We give from a half to a teaspoonful every hour in a glass of water until relieved. With these precautions no one need fear cholera.

DIED,

At Brenham, Texas, Dr. **John L. Watkins**, of yellow fever.

Prof. **Watkins** was born in the State of Alabama and studied medicine under Prof. Campbell, at Atlanta, where he graduated He practiced in Alabama until 1849, when he went with his wife to Nashville, Tennessee, and attended another course of lectures under the Professors of the University of Tennessee. Here the author of this article first met him. On his return home, he removed to this State and settled in Brenham, Washington county, where he obtained a large and lucrative practice. In the original organization of the Medicel Department of Soule University, he was chosen Professor of Theory and Practice of Medicine, and delivered his first and only course in Galveston, in the winter of 1865–6. After the term was over he removed his family back to Brenham, on account of their fear of the yellow fever. During the summer of 1866, his house was burned down, which, with other losses, prevented his return to Galveston at the regular lecture term, so early in the fall he tendered his resignation, which was accepted, and Prof. Gantt elected to his chair. Prof. Watkins was a profound thinker and a man of affable address—had been very successful as a teacher, and was universally respected. His place is hard to fill.

His family were sent away to the country and he was stopping with Col. Giddings at the time of his death. Though he left Galveston on account of his family, he would not leave his old friends to the yellow fever, but staid by them to the last day, and at the end of the epidemic, when he had helped so many others, he could not help himself. G. D.

Professor W. H. Gantt, A. M., M. D., died, of yellow fever, in Galveston, Texas, on the 6th of Sept., 1867.

Prof. Gantt was born in the city of St. Louis, Missouri. His father, Dr. E. S. Gantt, was a practitioner of Medicine in St. Louis at that time. He graduated in the old school of medicine under Dr. McDowell, and moved to the State of Alabama, where he was married to Mrs. Tucker, his surviving wife, by whom he has had six children—his youngest son dying with the yellow fever about the same time of his father's death. His entire family had the fever except Dr. Edward Gantt, his eldest son, who was in the country.

Dr. **Gantt** came to Texas from Alabama in 1855, and settled in Washington county. In 1865 he was elected Professor of Physiology in Galveston Medical College as the Medical Department of Soule University located then at Chappell Hill. He came to Galveston with his family in December, 1865, and purchased a home, but on the close of the lecture term he had

offer to return to Chapel Hill and deliver a course of lectures in the Literary Department, on anatomy, physiology and philosophy, which he did. He again returned to Galveston in December, 1866, and was elected to fill the chair of Practice and Dr. Hollenquist was elected to Physiology, but as Dr. Hollenquist did not fill his chair, Gantt lectured on both Physiology and Practical Medicine. On the reorganization of the faculty, Dr. Heard was elected to the Chair of Practice and Prof. Gantt to Surgery; but his untimely death has prevented him from ever filling his appropriate place.

Prof. Gantt was a fine speaker and writer—was popular with his class, and had made many friends in this city. His loss is felt by the community generally, but especially the Medical School. His soul was in the enterprise, and he risked all for its prosperity. G. D.

Galveston Journal.

We regret the lateness of our issue, but owing to our attack of erysipelas of the face, we could not attend to it. We insert several obituaries and have others which are crowded out for want of room. We send accounts with this number to all our patrons, with instructions, &c.

ERRATUM.

On page 948, after the bottom line, read:

precious to use for anything but tetanus, for which he considered it a specific. Of the aqueous extract of the root, he writes: "It is a famous application for chancre. I have, by spreading it over erysipelas, driven that inflammation away in a short time. I have cured irritable piles permanently in two or three applications. I have never found its equal in new burns." Besides his experience in private practice with the passiflora, he had a fine opportunity, during the late war, of using it in a military hospital, where there were many cases of syphilis, all of which he managed so successfully as to cause much surprise. Such is a very brief sketch of Dr. L.'s experience with this remedy.

I have myself used it in syphilis, but not in a sufficient number of cases to form a decided opinion as to its value. I never saw anything else act so promptly in erysipelas. I have used it with

BELLEVUE HOSPITAL MEDICAL COLLEGE,

CITY OF NEW YORK.

SESSIONS OF 1867—1868.

The Collegiate year in this institution embraces a Preliminary Autumnal Term, the Regular Winter Session, and a Summer Session.

The Preliminary Autmnal Term for 1867-68, will commence on Wednesday, September 18th, 1867, and continue until the opening of the Regular Session. During this term, instruction, consisting of didactic lectures on special subjects and daily clinical lectures, will be given, as heretofore, exclusively by members of the Faculty. Students designing to attend the Regular Session are strongly recommended to attend during the Preliminary Term, but attendance during the latter is not required.

The Regular Session will commence on Wednesday, October 16, and end about the 1st of March, 1868.

The Summer Session for 1868 will commence on the second Wednesday in March, and continue twelve weeks. This term will embrace courses of didactic lectures by the members of the Faculty of the Summer Session, together with clinical lectures at Bellevue Hospital, and the Charity Hospital, Blackwell's Island, and the daily recitations. Lectures will also be given by members of the College Faculty.

FACULTY OF THE COLLEGE.

ISAAC E. TAYLOR, M. D., Emeritus Professor of Obstetrics and Diseases of Women and Children, President.
James R. Wood, M. D., Professor of Operative Surgery and Surgical Pathology.
Frank H. Hamilton, M. D., Professor of Military Surgery, Fractures and Dislocations, and the Principles of Surgery.
Lewis A. Sayre, M. D., Professor of Orthopedic Surgery.
Alexander B. Mott, M D., Professor of Surgical Anatomy.
W. H. Van Buren, M. D., Professor of Diseases of the Genito-Urinary System.
George T. Elliot, M. D., } Professors of Obstetrics and Diseases of Women and Children.
Fordyce Barker, M. D., }
Benjamin W. McCready, M. D., Professor of Materia Medica and Therapeutics.
Stephen Smith. M. D., Professor of Descriptive and Comparative Anatomy.
Austin Flint, M. D., Professor of the Principles and Practice of Medicine.
R. Ogden Doremus, M. D., Professor of Chemistry and Toxicology.
Austin Flint, Jr., M. D., Professor of Physiology and Microscopy.
William A. Hammond, M. D., Professor of Diseases of the Mind and Nervous System.
N. R. Moseley, M. D., Demonstrator of Anatomy.
J. W. Southack, Jr., M. D., Assistant Demonstrator of Anatomy.

FACULTY OF THE SUMMER SESSION.

Henry D. Noyes, M. D., Professor of Opthalmology, and Dean of the Summer Faculty.
J. Lewis Smith, M. D., Professor of Morbid Anatomy.
Foster Swift, M. D., Professor of Diseases of the Skin.
Prof. Wm. H. Van Buren, M. D., Lecturer on Diseases of the Genito-Urinary System.
Prof. R. Ogden Doremus, M. D., Lecturer on Animal Chemistry.
Prof. Austin Flint, Jr., M. D., Lecturer on Microscopical Anatomy.
Prof. George T. Elliot, M. D., Decturer on the Diseases of Children.
Prof. William A. Hammond, M. D., Lecturer on Diseases of the Nervous System.

A distinctive feature of the method of instruction in this College is the union of clinical and didactic teaching. All the lectures are given within the Hospital grounds. During the Regular Winter Session, in addition to four didactic lectures on every week-day, except Saturday, two or three hours are daily allotted to clinical instruction. The union of clinical and didactic teaching will also be carried out in the Summer Session, nearly all of the teachers in this Faculty being physicians and surgeons in the great Charity Hospital on Blackwell's Island.

FEES FOR THE REGULAR SESSION.

Fees for tickets to all the lectures during the preliminary and Regular Term, including clinical lectures	$140 00
Tickets for any of the several departments may be taken out separately.	
Matriculation fee	5 00
Demonstrator's ticket (including material for dissection)	10 00
Graduation fee	30 00

Students who have attended two full courses in other accredited schools receive all the tickets for $70, exclusive of the matriculation fee. Students who have attended two full courses in this College, or after one full course in this College, having previously attended a full course in some other accredited school, are required to matriculate only. Graduates of other accredited schools, after three years, dating from the time of graduation to the end of the term, are required to matriculate only; prior to three years, they receive a general ticket for $70.

FEES FOR THE SUMMER SESSION.

Matriculation fee (valid for the succeeding Winter Session)	$ 5 00
Fee for each of the separate courses of lectures	10 00
General ticket admitting to all the lectures	50 00

Graduates of the Bellevue Hospital Medical College will be admitted to the lectures of the Summer Session on the Matriculation ticket; all others will be required to take out tickets.

☞ The dissecting-room will be kept open until about the first of May.

Payment of Fees is invariably required at the commencement of the Session. There are no exceptions to this rule.

Students, on arriving in the city, are requested to report at once at Bellevue Hospital, situated on the East River, between Twenty-sixth and Twenty-eighth Streets, and inquire for the Janitor of the College, who will take pains to aid them in securing comfortable accommodations without delay. Entrance to the Hospital is on Twenty-sixth Street.

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address the Secretary of the College, Prof. Austin Flint, Jr., Bellevue Hospital Medical College

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CATALOGUE

OF THE SESSION OF 1866-7,

AND

ANNUAL ANNOUNCEMENT

OF

GALVESTON MEDICAL COLLEGE

FOR THE SESSION OF 1867-8.

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will begin on the First Monday in DECEMBER, 1867, and close on the First Wednesday of MARCH, 1868.

GALVESTON MEDICAL COLLEGE.

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THE

Galveston Medical Journal.

Vol. II. DECEMBER, 1867. No. 12.

The Obstetric Forceps.

BY S. F. STARLEY, M. D.
Of Fairfield, Texas.

There are few subjects within the whole domain of Obstetric science of such vast importance to the practitioner of the art of Midwifery and to suffering woman as that of the legitimate mission and proper use of the Obstetric Forceps. When we consider the numerous instances in which their skillful operations would terminate and render safe both to mother and child an otherwise protracted, painful and dangerous labor; and then reflect upon the lamentable fact that so few practitioners throughout the broad extent of our land bring to the aid of their suffering patients this boon of humanity, we cannot refrain from asking why it is that this most valuable instrument is consigned to such unmerited neglect? Why is it that at least nine out of every ten practitioners in the country will tell us, when interrogated on this subject, that they have never had occasion to apply the forceps, although many of them have done quite an extensive practice in the Obstetric line? Such is the indifference manifested in this matter that very few practitioners in the *country* are provided with the instrument, and rarely do we meet with one who is in the habit of taking it with him when summoned to attend a woman in labor, although his patient may be many miles off. Is this because they do not meet with cases presenting indications for the proper use of the instrument? Surely not, for we all encounter cases in which the second stage of labor, when left to the unaided effects of nature, is tedious, difficult and agonizing to the last degree; and in many of these cases—may I not say nearly all?—there is only some slight difficulty. Perhaps the head in its descent has underwent too great flexion, or nature, from some cause, is slow in performing the indispensible rotation, or there may be only a little disproportion between the size of the head and the dimensions of the pelvic outlet, requiring powerful and prolonged uterine contractions to effect the degree of *compression* necessary to allow the head to pass. Now, all this entails extra labor, and in many instances the most excrutiating torture upon the poor woman, whose imploring look and earnest appeals to us for help, is surely enough to cause any conscientious man to ask himself the question whether he has come prepared in head and in hand to do all that suffering humanity demands of one who professes to understand the science and art of obstetrics, and takes upon himself the responsibility of ministering at its altars. Nor is the relief of present suffering the sum total of his duty in these cases. But he should have his mind fixed upon doing all in his power to prevent the evils both to mother and child—and especially the former—that so often follow protracted and exhausting labors. Does any one know how many of the cases of uterine disease, in its multifarious forms and complicated varieties are caused by the unnecessary protraction of the process of parturition? For my part, I am convinced that many of the inflammatory diseases and displacements of the uterus are caused by permitting women to suffer and labor for many long and weary hours, after nature has placed them in a situation that would admit of safe, easy and comparatively painless delivery by the forceps. I believe that there is not a town, village or neighborhood in our broad land that does not contain examples of women suffering from the cause above mentioned.

If, then, the obstetric forceps is so valuable an instrument in the hands of the skillful obstetrician, why is it that its use has not become general in the hands of the regular profession? I think that the principal cause of this delinquency on the part of practitioners is to be found in the manner in which nearly all of our standard authorities in obstetrics have been in the habit of dealing with this subject in their writings and lectures. Although they give ample instruction as to the performance of the operation, the proper kind of instruments, the necessary conditions relating to the patient, etc. Yet they handle the subject in such a way as to make the impression on the mind of the student that the indications for its performance will be rarely met with, and that it requires a degree of knowledge and skill that few may hope to acquire. I have never been able to see the utility of teaching men how to perform an operation so often needed, so indispensable for the welfare of our patients in many cases, and so creditable to the science and art which we profess to understand and to practice, and then in the same breath scare them from attempting its performance, by suggesting a thousand evils that may follow—not one of which is possible as a result of the operation in well selected cases, and in skillful hands; and surely none but the latter should ever attempt to use the obstetric forceps. While on this part of the subject I cannot omit to mention the praiseworthy efforts of Dr. D. W. Brickell, Professor of Obstetrics in the New Orleans School of Medicine, to place this important operation in its proper light before his pupils and the profession at large. His articles on the "Obstetric Forceps," published in the 1st volume of the Southern Journal of the Medical Sciences, (1866,) is well worth the price of ten years subscription to the journal. I contend that no man who lacks the knowledge and skill necessary to perform this operation, under all ordinary circumstances, with perfect safety to both mother and child, has any business in the lying-in room in the capacity of accoucher. More, if he has not the capacity to qualify himself to perform it well, he has mistaken his calling, and should leave the study and practice of medicine to men of better minds.

I repeat, that in my opinion many of the cases of uterine disease, especially those of an inflammatory character, are the sequences of protracted labors—labors that might have been terminated with perfect safety in time to have averted the direful consequences too often following prolonged muscular contraction and nervous exhaustion. I do not propose to point out in this paper the various special indications for the use of the forceps. They are, however, more numerous and much oftener met with in practice than the dicta of our standard works would lead us to suppose For many years I have been in the habit of resorting to the use of the forceps rather than permit my patient to endure the agonies of a protracted labor, and have never yet seen cause to regret having used them. More than this, I have generally found that the pains of labor are much more bearable with the forceps applied than without them. For instance, of giving pain by the impringement of the instrument upon the mother's parts, I have found that by performing whatever of *rotation* remains to be executed, and the keeping of the long diameter of the head in correspondence with the curve of the pelvis, together with the slight *compression* of the head within the blades of the forceps, the woman is really relieved from the painful pressure of the impringing head of the child, which was being driven against the sides of her pelvis with a force proportionate to the power and energy of the uterine contractions. This every one who is familiar with the mechanism of labor in vertex presentations, and the modus operandi of delivery by the forceps, will readily understand. I am no advocate for incompetent men undertaking to use the forceps. Nothing could be more brutal than to seize the head of an infant with iron hands, and attempt to drag it through its mother's pelvis, regardless of the laws and mechanism of the process it is intended to facilitate. But this is no argument against the timely and skillful employment of the instrument, and the man who neglects or fails to master this part of the obstetric art, is simply unfit to assume the responsibilities involved in the practice of midwifery. And here I disclaim any captious disposition towards those practitioners who look upon the forceps as such a terrible instrument. The fault is generally attributable to the teaching they have had. But it is high time for accoucheurs who wish to exemplify in their practice the conservative principles of the obstetric art to see to it that their conservatism is on the right side of questions involving the rendering of assistance where nature fails or is too tardy in the performance of her functions, and that their patients have the benefit of the knowledge and skill that they have a right to expect of those who assume the responsibility of conducting them through the stormy and perilous period of child-birth.

Were the forceps skillfully used in all suitable cases, many a frightful post partem hæmorrhage would be avoided; many a dangerous fever from protracted suffering and nervous exhaustion would be averted; many a chronic inflammation of the os and cervix uteri would be escaped; many an injured bladder would remain sound; and last, if also least, many a tedious hour of most agonizing torture would be taken from the period of woman's greatest suffering. Are not these facts—and facts they are—well worth the thoughtful consideration of all who practice or intend to practice the art of obstetrics?

Perhaps some may conclude that we would recommend or use the forceps in cases where ergot would answer as well or better. We think not. Ergot is a very uncertain remedy, often disappointing our expectations; and when it does act, its effect either for good or evil is beyond our control. Moreover, it sometimes produces the very evils for the avoidance of which we use the forceps, viz: injurious pressure of the tissues of the mother in cases where even slight malposition of the head renders difficult the different steps of its passage through the pelvis. God help the woman who should take ergot, to facilitate labor, from a man who was not competent to use the forceps! I have not the egotism to attempt laying down rules for the mechanical execution of the operation of delivery by this instrument. These rules are to be found in ample detail in all the leading works on midwifery. I will say, however, that the instrument, as modified by Prof. Hodge, of Philadelphia, is the one I prefer and always use.

Were the various indications for the use of the forceps as clearly set forth in our standard works as are the different steps of the operation itself, there would now be no necessity for addressing the profession through the pages of medical journals on this subject.

Should the foregoing remarks tend to direct the attention of others to this effective means of giving aid in time of need, we shall feel that we have at least done something in the interests of humanity, by adding our humble testimony in favor of one of the greatest boons that the inventive genius of man has bequeathed to suffering woman.

Organic and Inorganic Matter Contrasted, Philosopically, Anatomically and Physiologically.

BY J. D. RANKIN, M. D.,
of Palestine, Texas.

There was, most assuredly, a time previous to the present cosmic career, when Deity occupied infinite space all alone. Doubtless the first effort of his will, was to create matter for the construction of a natural world; the result of which was the willing into existence of sixty-four primitive elements, which, in various proportions of combination, form the constituent elements of every organic or inorganic component. Every body organic or inorganic is made up principally of four of those primitive elements, viz: carbon, oxygen, hydrogen and nitrogen—therefore we observe that those four primitive elements, in slightly varied proportions of combination, form the constitual material from which every substance is made up, be it organic or inorganic. At the same time that Deity created organic and inorganic bodies, He fixed certain generic laws over them, which was to govern their development, for all ages to come, and to keep them in the order and line of their species.

For instance, we never observe an arm to spring out from the cordal extremity of the trunk, or a leg from the cephalic extremity; nor do we ever find the heart in the abdomen, or the liver in the chest. It is the generic law that causes the oak tree to have the same physical and vital appearance at this day that the same species of tree had a thousand years ago—that causes the leaf of the china tree and its berry to be the same this year that they were a hundred years ago. It is this generic law which Deity stamped upon the countenance of every body, organic and inorganic, which holds it in its regular line and order, and brings it out the same one generation after another—as you plainly see that the ox is the same to-day in his physical contour that he was a thousand years ago, and so it is with the hog, the horse, the dog and every other created organism. We observe a great difference in organic and inorganic bodies, in regard to their physical and vital development, as well as their persistency. If we compare the organs or structures of a dog, horse or man, we find a very great difference in their physical appearance, but if we pass from structural analysis to ultimate analysis, we find them all to consist of the same ultimate elements in various proportions of combination, viz: hydrogen, oxygen, nitrogen and carbon. If we compare by structural analysis the various tissues of the oak, the walnut, the poplar, the beech and the chesnut, we find the structures to differ widely; but if we pass to chemical or ultimate analysis, we find them all to be composed of the same ultimate elements, in varied proportionate combination. The same rule holds good with inorganic bodies. The various minerals and earths, when compared by structural analysis, are found to differ widely in their physical appearance; but when they are carried to their chemical or ultimate analysis, they are found to be composed of the same ultimate elements in slightly varied proportions.

Organic bodies of every description are of a short-lived nature, compared to inorganic bodies. It is also observed that there is a very great difference in the persistency of vegetable and animal organic life. Deity made but one such creative effort, from which his plastic powers were so much exhausted that they required at least a century for recuperation, to enable them to make a like effort.

We say that man is the highest order of animal life, and yet his stay is but a step, as it were, compared to inorganic life; one generation after another passes away as rapidly as the morning fogs are dispersed by the sunbeams and breezes of noonday.

Man, weak and feeble man, after death, passes down the oblivious stream of time, forgotten and unregretted. The room that was occupied on yesterday with a death-bed scene, is to-day used by a dancing party, and the face that on yesterday was impressed with grief and sorrow is to-day occupied with gay smiles; and the person who was clothed on yesterday in mourning is to-day appareled in the gayest of fashion. Such are the rapid events of animal life, and the lower we go in the scale the more rapid and less persistent do we find animal life. The time allotted to man is three score years and ten; other animals live a much shorter time—some live ten, others five and three; and as we descend in the scale we find the time of life shortened. Insects by the million are developed, and live but a few weeks; and when we come to the infusoria we see them spring into existence by the countless million this month, and the next one pass into nonentity. Such are a few examples of the rapidity with which organic animal life passes from the living to the dead state.

Vegetable organic life is much more persistent than animal organic life, and this persistency depends upon a difference of the constructive and destructive operations of the vegetable and the animal.

In animal life, for the first period, the constructive processes are in excess of the destructive, and during this time the animal grows; when it is grown the constructive and destructive processes are in equilibrio, and this is regarded as the period of culmination on the middle age of life. In the decline of life the destructive processes are in great excess of the constructive, and this brings old age. Now, in vegetable life, these processes go on quite differently. The constructive processes of life are always in excess of destructive, and hence the forest tree continues to grow from year to year so long as it lives; but it does not live so long as inorganic bodies. Some trees live a thousand years, others live a hundred, others fifty, and many only live twenty, ten and five years. As we descend in the scale of vegetable organic life we observe that life is much shortened. The oat straw that vegetates in March culminates in June, and decays in September, while many other species of vegetables have an existence of but a few short weeks; while the lowest order, as the fungi, that springs into a culminating existence in one night, under the dripping of the refreshing dews of Heaven, are plunged into nonentity under the blasting influence of the following day's sunbeams; but how different is inorganic life in regard to its persistency. The Pyramids of Egypt are to-day standing as living witnesses of all the events of time that have elapsed since the commencement of the cosmic career. The stars course their way silently through infinite space at this time, just as they did in the morning of creation. The sun sits in the solar centre of creation as a Nidus, from which all matter is to gravitate, giving all created matter the basking influence of her rays, just as she did when she was first cast from the plastic hand of Deity. The earth, one of the largest masses of inorganic matter that we are acquainted with, continues to perform her regular girations around the sun with as much beauty as she possessed in the first creation hour, and will continue to do so, at least until the next great catechism.

Intermittent and Remittent Fevers.

Some Objections to Dr. J. H. Salisbury's Theory of their Cause and Pathology.

BY S. P. BRECBINRIDGE, M. D.,
of Danville, Ky.

We are all more or less familiar with Dr. J. H. Salisbury's theory of the cause of intermittent fever, presented to the profession in the columns of the American Journal of the Medical Sciences, for January, 1866. It is the theory of "elimination," and like Dr. Geo. Johnson's theory of elimination, in the case of the cholera poison, it is characterized by the boldness of its statements and the unhesitating positiveness with which they are made. Unlike Dr. Johnson's, it is not a theory built on facts which have long been the common property of the profession, but one which rests on the broad foundation of a special discovery. Not that the sweating stage of an ague had never before been regarded as an effort of nature to throw off some morbid product from the system, for such an idea is not by any means new; but adopting this old supposition as his own, and moulding it to fit certain supposed facts just brought to light, he presents us with a theory which, if true—and it can readily be tested—settles at once the long vexed question of the origin of intermittent fever. It is not usual for a great discovery in medicine to be made, elaborated and announced as true within the space of a few months. Jenner was a long while engaged with the cow-pox virus, and Bassereau devoted years to the discovery of the duality of the syphilitic poison. Perhaps, however, as Americans are the fastest people in the world, and take the "shortest cut" on every occasion, they may carry this national peculiarity even into the realm of science. It has been said that Dr. Benj. Rush thought nature was a good deal shaken by the Declaration of Independence, and it may be that she has not yet recovered her self-possession, but yields up her secrets upon the first demand of a free-born American. However that may be, we are told positively by Dr. Salisbury that he has discovered the cause of intermittent fever, and it consists in nothing more or less than the introduction into the system of the spores of certain kinds of cryptogamic plants. Now a good many years ago, Dr. J. K. Mitchell suggested* that malaria might be due to a vegetable agent pervading the atmosphere, and too minute for even microscopic detection; but Dr. Leidy† declared this to be an absurdity. "The smallest of all known beings," he said, "is the Vibrio Lineola Muller, measuring only the 36,000th of an inch, and the smallest known vegetable spore is very much larger than this, whilst particles of inorganic matter can be distinguished the 200,000th of an inch in size. To assert, under these circumstances," he continued, "that there are spores and animalculæ capable of giving rise to epidemics, but not discernible by any means at our command, is absurd, and it is only saying in other words that such spores and animalculæ are liquid and dissolved in the air, or in a condition of chemical solution." These observations do not apply, however, to Dr. Salisbury's proposition, for that is quite different in one respect from Dr. Mitchell's. The theory of Dr. S. is simply this, that there are certain plants—called palmellæ and palmelloid—which act as a direct poison to the epithelium of the mucous membrane—that they are easily detected both in and out of the body—that they multiply until nature becomes irritated at their presence, and makes an effort to expel them, and that this effort is seen in what we call a chill. In a large number of cases of intermittent fever, he thought he could trace a connection between the disease and the presence of these malignant little plants, growing somewhere in the vicinity. Indeed, he subjected the excretions "of several hundred cases to careful microscopic examination," and states that his examinations "establish the fact that ague plants, the same as grown upon the ague soil, are constantly developing in the system of the intermittent fever patient." Many other observations, by other observers, and in different places, will be needed to confirm this statement. Even if it should be ascertained that these vegetable spores frequently exist in the excretions coincidently with malarial paroxysms, the relative positions of cause and effect could not, from this alone, be assigned to them. And, furthermore, as was recently remarked,* "after the relation between the poisonous palmellæ and the febrile attacks shall have been established to be causative, and not merely coincidental, we shall by no means regard it as proved that these algoid spores constitute malaria, or are to be considered as the exclusive producers of periodical fevers."

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* "On the Cryptogamic Origin of Malarious and Epidemic Fevers."
† "Fauna and Flora," see Introduction.

One thing must be said in compliment to Dr. S., that whether his supposed discovery be real, and destined to live, or an enthusiastic illusion which shall perish after an ephemeral notoriety, he certainly deserves the thanks of the profession for the untiring energy he has displayed throughout the period of his researches. No doubt he wishes more than thanks. As his only object has been the attainment of scientific truth, he will be desirous of having his observations carefully scrutinized and put to the test.

Unfortunately, there are many malarious districts in our country, and abundant opportunities will be offered for confirm-ing or refuting his results; yet, heretofore, little or nothing seems to have been done in this respect. It is a rather singular circumstance that this bold and interesting paper has elicited so little comment from the medical journals. Those to which we have access—English, French and American—gave the discovery a passing notice when it was first promulgated, and then dropped it, apparently, forever. Now, one of several alternatives must exist in this case. Either they regarded it (the discovery) as being so plainly true and self-evident that discussion was uncalled for, or they considered it too important for any but the most serious debate, accompanied by experimental researches which they have not had time to institute, or else they looked upon it as too shallow and worthless for their attention. But none of those suppositions is altogether satisfactory. The first one we cannot admit. The second might have held good a year ago, but has lost its force now; and as for the third, who would think of applying it? Perhaps the main cause of this general silence is, that most members of our profession are not familiar with the different varieties of cryptogamic plants, and hence find themselves unprepared at once to investigate questions pertaining to this class of medical botany.

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* Dr. S. H. Dickson on Causation of Diseases—"Richmond Medical Journal," for January, 1867.

If it shall unhappily appear that this discovery cannot stand the test of investigation, we will not be utterly discouraged. We remember vividly Dr. Salisbury's article on the cryptogamic origin of camp measles*—an article which displays a warm love of discovery, and a spirit of buoyant hopefulness—and we cannot but feel that, if there be any poisonous spores pervading our atmosphere, his keen eye will detect them.

While awaiting the publication of further researches on this subject, the following objections to his theory are respectfully submitted:

1st. Dr. Salisbury declares,† "so far as I have examined (and my observations have been widely extended) I never have found a case of ague *in situ*, where I did not find these plants ('three species of palmellæ, or palmelloid plants, one green, another red, a third lead colored,') growing near; and *vice versa*, I never have found these plants growing in any locality but that (if such locality was inhabited) intermittent or remittent fever, or both, prevailed in proportion to their extent and profusion." Now the first part of this sentence is quite credible, for the place of growth of the Algæ is extremely various.* Whenever moisture of any kind lies long exposed to the air, Algæ of one group or other are found in it. Moisture and air are the only requisites in the development of this class of cellular plants. Different species may be found at all temperatures. Some flourish in the tropics, others in the temperate zone, and still others, like the red snow plant (which is of the family Palmellaceæ, and is analagous in form and color to the "Gemiesma rubrum" of Dr. S., "which produces intermittents of a congestive type") find an appropriate soil on snow-capped mountains, or on the surface of polar ice. The very air which we breathe is supposed by some authorities to be the natural home of that form of vegetable life now under consideration. "It has even been supposed," says Mr. Wm. H. Harvey, of the Dublin University, from whom we have just been quoting, "that the minute Diatomaceæ, whose bodies float through the higher regions of the atmosphere and fall as an impalpable dust on the rigging of ships far out at sea, have been actually developed in the air, fed on the moisture semi-condensed in clouds, and carried about with these "lonely" wanderers. When this atmospheric dust was first noticed, naturalists conjectured that the fragments of minute Algæ of which the microscope showed it to be composed, had been carried up by ascending currents of air, either from the surface of pools, or from the dried bottoms of what had been shallow lakes. But a different origin has recently been attributed to this precipitate of the atmosphere by Dr. F. Cohn, Prof. Ehrenberg, and others, who now regard it as evidence of the existence of organic life in the air itself! This opinion is founded on the alleged fact that atmospheric dust, collected in all latitudes, from the equator to the circum-polar regions, consists of remains of the same species, and that certain characteristic forms are always found in it, and are rarely seen in any other place. Hence it is inferred that the dust has a common origin, and its universal diffusion round the earth points to the air itself as the proper abode of this singular fauna or flora—for minute animals would seem to accompany, and, dubtless, to feed upon the vegetable atoms. If Algæ thus people the finely divided vapor that floats above our heads, we shall be prepared to find them in all water condensed on the earth. The species found on damp ground are numerous. These are usually of the families Palmellaceæ and Nostochaceæ." One of the plainest conclusions to be drawn from these remarks is, that palmelloid plants, being spread generally over the earth, will frequently enough be found in districts where intermittent fever prevails, just as confervæ are often found under like circumstances; but while naturalists acknowledge the value of the latter plants, as respects their influence upon the atmosphere, they have heretofore never discovered deleterious effects accompanying the growth of those first mentioned. The mere fact of the existence of malarial disease in the the vicinity of this form of cryptogamic vegetation, no matter how often it may occur, is no evidence of the relationship between them of cause and effect. But, on the other hand, instances may be pointed out of the prevalence of periodic fevers in places where the most scientific explorers could detect in the air neither vegetable spores nor any solid particles whatever. *"Frequently, says Dr. Joseph Leidy, "I have examined the rains and dews of localities in which intermittents were epidemic upon the Schuylkill and Susquehanna rivers, but without being able to detect any animalculæ, spores, or even any solid particles whatever. I have examined the air itself for such bodies, by passing a current through clear water. This was done by means of a bottle with two tubes passing through a cork stopper; one tube dipping into the water, the other reaching not quite to its surface. By sucking upon the latter tube a current of air passed through the former, and was deprived in its course of any solid particles. Ordinarily, when the atmosphere was still, early in the morning, or in the evening, neither spores nor animalculæ could be detected ! When piles of decaying sticks or dry leaves were stirred up, or the dust was blown about by the wind, a host of most incongruous objects could be obtained from the air; none, however, which could be supposed capable of producing disease." Dr. Leidy has since stated that he has had palmellæ and many other species of Algæ growing in his chamber without experiencing from them any symptoms of periodic fever. It may be said that this is negative evidence. We reply, that is true, but if it is established, in even one case, that the febrile attacks were not caused by vegetable spores, it has become manifest that these spores are not the exclusive cause of this disease.

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* "American Journal of Medical Sciences" July, 1862.

† "American Journal of Medical Sciences," January, 1866, page 63.

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* Wm. H. Harvey on Marine Algae. Smithsonian Reports, 1855.

2. There are numerous instances of regions rich in cryptogamic growth—possessing the varieties of Algæ in the most luxuriant profusion, and yet apparently exempt from the ague poison. Such are portions of Hindostan, some Islands in the

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* Introduction to Flora and Fauna within Living Animals.

† Dr. S. H. Dickson, on the Causation of Diseases. "Richmond Medical Journal," January, 1867.

Indian Ocean, the bayous of Louisiana, and the Dismal Swamp in Virginia.†

On the other hand, the arid, rocky island of Malta, where no vegetable growth is said to exist, is especially obnoxious to the periodic fevers. When the British army, in 1794, was decimated by malarial disease in Walcheren, it was encamped on soil consisting "of a fine white sand and about a third part clay," which supported no vegetation but stunted plants.*

3. The statement of Dr. S., to the effect that quinia checks the multiplication of yeast plants in fermentation, seems to be incorrect.

We made the test first with Sulphatis Quiniæ gr. v., and yeast one drachm, and wheat flour enough to show plainly the process of fermentation, if it shoutd occur. On examination, sixteen hours afterward, fermentation was seen to have proceeded just as if the quinia had not been present. The same amount of yeast (one drachm) and flour (one teaspoonful) was tried with sulph. quiniæ gr. x., with a like result. Then twenty grains of salt were used, and finally *half a drachm* of the same to the above mentioned quantities of the other substances—but still fermentation went on as usual. The dough "rose" to the customary height, and after being baked presented the appearance of a very respectable breakfast roll. It tasted extremely bitter—that was all. On microscopic examination, the risen quinine dough presented appearances identical with those of the risen unmedicated dough, with the exception of the presence of quinine crystals.

Thus the analogy sought to be established between the action of quinine in controlling the development of the "malarial cryptogams," and its action "in checking the multiplication of yeast plants in fermentation," cannot exist—except where it would be useless to science to find it—in the author's imagination.

4. A paroxysm of intermittent fever cannot be regarded as an effort to eliminate poison from the system, because its prevention, or arrest, benefits the patient. The latter *fact* is too obvious for comment.

5. The arrest of a paroxysm by the mere application of ligatures to the limbs of the patient,† points to the nervous system as the actual seat of the disease. According to Brown-Sequard, than whom there is no higher authority, the malarial poison produces fever by a peculiar influence upon the spinal cord, and the

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* Sir Gilbert Blane, quoted by Dr. Thomas Watson.

Brown-Sequard. London Lancet, Reprint. May, 1866.

success of the ligatures against fever and ague is due to a favorable change in a nervous centre, induced by a peripheric irritation of incident nerves.

6. In many cases of intermittent fever *there is no sweating stage*, but simply a chill and fever. Consequently the poison is not eliminated according to the theory under consideration—yet the patient may speedily get well.

7. On the other hand, the health of the patient fails in proportion to the frequency and copiousness of the morbid diaphoresis which accompanies a paroxysm.—*Richmond Medical Journal*, *May*, 1867.

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Atmospheric Influence Upon Mortality at Different Ages and in Different Countries.

M. Lombard, of Geneva, has arrived at the following conclusions:

Cold increases mortality among newly born and very young children, and among old men in a proportion decreasing with age in children and increasing with age in the old. Heat also exercises a disastrous influence upon children of from six to twenty-four months, who die in numbers increasing as we approach the equator, in consequence of the heat. The capacity of resistance to atmospheric influences increases with age from the time of birth; it attains its maximum between twenty and forty years, from which point it diminishes with the advance of years.

Palludal emanations have great influence upon the distribution of mortality. They constantly diminish the power of resistance to atmospheric influences in such a manner that, in marshy regions, children from the age of one month to ten years die in greater numbers during the warm season; and if that influence appears inconsiderable from ten to forty years, it returns after that period with an increasing intensity, but in a contrary way; that is to say, if heat is particularly fatal until the age of forty, from that period cold causes the greater ravages, the capacity of resistance to cold gradually diminishing in direct proportion to age, and with the greater rapidity as the country is more marshy and the latitude more southern.—*Jour. de Med. et de Chir. Prat., July*, 1867.

Movement of the Blood.

BY PROF. RUFUS KING BROWNE,
Late Professor of Physiology in the New York Medical College.

In 1861, while making some experiments, in a series of lectures on the circulation, I was struck with the fact that the red globules pursue the round of the circulation at a vary different rate from the plasma. The first observation which induced this conviction was, that under the microscope some globules may occasionally be seen to await the precedence of others. This fact could not be made to accord with the supposition that the globules were simply borne along at the rate of flow of the plasma. That the part of the plasma corresponding to the line of the waiting globule, continuous with the whole volume, should hold back and restrain the globule, and participate in the rate of flow of parts beside and continuous with it, was wholly impossible to be reconciled with the ordinary supposition that the globules and plasma moved at the same rate. So, too, other similar facts, as for example the fact of the undue accumulation of red globules on the capillaries of particular regions, could not be explained on the ordinary belief. In order to understand this last phenomenon, we must assume as fact, either that the plasma can advance and leave behind the globules in a state of accumulation, or that the globules are capable of advancing at a far more rapid rate, and do themselves accumulate in particular parts. In reality, to explain the phenomenon, we must regard one or the other as facts.

It was not until the last winter, however, that I was enabled to assure myself of the exact truth of the case.

The entire column or stream of blood, it is universally believed, moves at a rate which is the same for all the contents of the blood-vessels, in any given section of the blood-vessels, during any given time, the solid bodies being borne along and moved by the plasma. But in reality the red corpuscles move in the fluid and through it at a much more rapid rate than the plasma. It is on this, as an acknowledged fact, that we can explain the great difference, in particular sections of the vascular system, of the marked variation in the proportions there of the plasma and globules, as for example in the capillaries of the lungs. First, in those portions of the blood channels, as the veins, which cannot of themselves act to forward the whole column of blood, as in the arteries, a far larger proportion of red globules to plasma in given measure can be found. This is regularly the case; and is due to the fact that there is a comparative accumulation of red globules in the veins, causing a retarded or slow movement as compared with their free progress in the arteries. This retardation can only be relieved by some accelerating force at the cardiac side of the column of venous blood. As successive portions reach the venous side cavities of the heart, and their passage into the pulmonary capillaries is accelerated by the ventricular impulse, the globules resume their usual rapid rate of flow. Between the heart and these capillaries, the unequal proportion of globules to plasma, or the excess of globules, causes the pulmonary capillaries to be crowded with them, to the comparative exclusion of plasma.

As the globules push forward at a much more rapid rate than at the section of the accumulation, through the pulmonary circuit, into the arterial cavities of the heart, the new impulse of their contraction greatly accellerates the flow of the plasma as well as red corpuscles. As a necessary consequence of the comparative accumulation of globules in advance of the arterial part of the circuit, the plasma has been retarded in the smaller arteries and capillaries, and its proportion to globules, nearly the reverse of that in the veins; but with the impulse of the heart, the volume of plasma from the cardiac to nearest the smaller arteries, has an increased rate of flow over that still nearer the capillary system.

There are, therefore, three distinct stages of the circulation dependent on a difference in the rapidity of flow between the liquid and soft solid elements of the blood. One is in the arterial cavities near the heart, in which the blood corpuscles are fewest in proportion to the volume of plasma. It is here and at this stage, that the great disproportion between the two, up to the arterial side of the heart, has not yet been, but is being equalised by the rapid advance of the corpuscles through the plasma. This disproportion continues up to the left ventricle, when it begins to be overcome by the more rapid advance, compared to the plasma, of the corpuscles, tending to distribute them equally through the columns of the fluid. Throughout this part of the system there is no accumulation of globules, and no impending influence upon them, consequent upon it. But the rapidity of the flow of plasma slightly decreases for the liquid, from the heart toward the capillaries.

The second stage is in the capillaries, where the rate of passage of the plasma is further lowered, and that of the globules continues the same. This continues until the globules reach the venous auricles, a point at which the accumulation nearest the arterial side of the heart commences. But the accumulation already exists from this point on to the venous side of the heart. This accumulation is due to the constantly existing rapid flow or progress of the globules over the rate of the plasma, and is to be understood when we give due attention to the fact that the blood is an endless column, no part of which is a terminus, a beginning and end, and further, that the arterial flow is also an endless movement which, though variable in the part of a continuous rate, has no moment of commencing, and no moment or time of ending. Nor is this a complete statement of the necessary element of understanding the case, for as the entire, endless flow or movement has no beginning or end, none of the parts of the movement has a beginning and end, or moment when the flow, having ceased, begins, and when ceasing, it ends. In the veins, therefore, the globules regularly have accumulated. They occupy the calibre of the vessels with a very small proportion of plasma, which cannot flow past, nor in a continuous stream through them. Their position is now in advance of the continuous stream of plasma, of which they take a gained precedence. At the same time, at the cardiac end of the venous system, the volume of blood is leaving it, to pour into the venous cavities of the heart. This is taking place at the cardiac end of what we may call the accumulated column.

The conditions here are a greatly disproportioned quantity of globules. They cannot be carried forward in this space by the plasma, which cannot gain on them, but is nearly quiescent. But simultaneously, the venous ventricle impels each of its charges forward by contraction, and the disproportion of the red globules is necessarily maintained through the capillaries of the pulmonary circuit. A new impulse is given to the whole, but the red globules again move at a more rapid rate.

In the lung circuit, or pulmonary artery and its capillaries, globules renew from the cardiac side, and increase their rate of speed in the same disproportion to plasma. They, almost alone, always crowd the capillaries of the air vesicles, which accounts for the uniformly observed fact, that they are far more numerous here in a given space than in the arterial system or the capillaries elsewhere.

Turning into the arterial cavities, the flow of the plasma being at the lowest rate, and in fact, dependent, in part, for that rate, upon the globules pushing forward, is accelerated by the heart push or pressure, from which point it again declines in rate outward, while the globules, having moved through it, become more equally propertioned to the plasma by distribution. There is, therefore, a difference of rate of speed for the fluid blood and for the cell-like elements. Nor is the rate of either uniform throughout the flow. There is, in different parts of the circuit, a difference in rate of the plasma, and a difference in rate of the globules. Acceleration of the latter supervenes on the cardiac impulse on its lowest rate of passage, and the decline of rate immediately supervenes on the accelerating impulse, a continuous gradation of movement. The lowest rate of both nearly coincides in the veins. Here the quantity or proportion of each greatly differs from that in the arteries, for the red globules are enormously in excess, in consequence of their rapid progress through the plasma. In no two parts of the system is there, however, any uniformity in the proportion of the soft-solid and liquid parts of the blood.

Though there is no point of beginning or ending for either the column of blood, nor the time of beginning nor ending of the variations in its rate, yet there is a moment when the blood is stayed on the venous side of the heart, namely, when the contraction of the venous auricle last preceding the systole of the ventricle occurs; and there is also a moment midway of the column, when the column receives a new impulse in the form of a push. Last preceding this, there is likewise a moment when the column is divided at the auriculo-ventricular line, the heart being collapsed, and no interposing force is exerted. The latter is longer than the first, for the division or separation continues until the venous cavity has time to fill and contract. The regular recurrence of this moment of separation and lapse of cardiac pressure, has effects which we cannot yet estimate, from defects of observation. We can only say that there is a part of the venous hollow which collapses and contains no blood, thus making it a hiatus or hypen in the column. This collapse must change to an open state and fill the space. . But up to this time the column is divid until the pulmonary valves open and a charge passes through them, and simultaneously with this reaction of the column at this point, it is divided behind at the auriculo-ventricular valve which operates between the emptying cavity and the back column.

It appears to me plain that these facts, although I do not at present suggest all their applications, explain many morbid conditions, the obvious effects of which is evident in the accumulation of globules, and the consequent staying of advance of the globules and flow of the plasma. Under these conditions the plasma must transude through capillary walls, and collecting there, cause the nidus of absesses, etc. But of these applications we must say something in another paper.

There can be no doubt that the column of plasma, were the rate of the globules no faster than its own rate, would bear them along at the latter rate and not permit them to fall behind, in virtue of the fact, that a stream of fluid will carry particles along at its own rate, where they are not caught or arrested by any projection in the stream. Hence the circumstance we named a while before, which might, through a mistake, be adduced as explaining retardation of motion of the globules could never exist, because if the red globules tended to move slower than the plasma, the plasma itself would necessarily and inevitably carry them forward at its own rate, effectually precluding their accumulation by their retarded movement, the plasma leaving behind or gaining on them. Hence, also in observing the slow, and for the instant, delayed movement of the globule back of those in advance two rows, entering the same capillary, and measuring the rate of the whole blood, by the movement of the globule, we suppose the two current capillary streams, tending into a third, to be moving at different rates, but in reality the movement of the fluid portion is the same in either, but in one the red globules are faster than the other, taking precedence. This often observed incident proves that the globules have a motion not all alike, as generally supposed, being moved by the fluid column, but in reality have a movement through that column, each for itself.

The reason why there is relatively a small portion of globules in the capillaries, is because of the enormous greater channel space in the latter than in the arteries. As they move forward to the veins, they again are limited to the greatly diminished space, and must necessarily accumulate and impede each other.

In fact this regular difference in the relative portion of plasma and red globules, implies the fact, that the one moves at a very different rate from the other. It could never occur if the globules are passive, thin, or inert bodies, moved along by the plasma, being in fact propelled by it.—(Phil.) *Med. and Surg. Reporter*, Sept. 14th, 1867.

The Clinique—Bowel-Affections of Children.

Abstract of a Clinic by Prof. N. S. Davis, in Medical Wards of Mercy Hospital, September, 1867.

From the Chicago Medical Examiner, November, 1867.

Gentlemen :—Here is an infant, about eight months old, laboring under one of the most common and fatal forms of disease that the practitioner is called upon to treat. And though the mother has brought it here unexpectedly, I shall make no apology for occupying your attention with the disease which it illustrates, during the present clinic hour.

You notice the child is pale, emaciated, restless, the eyes a little sunken, the line from the alæ-nasi to the angles of the mouth depressed, making an expression of sadness; and if you examine more closely, you fine the skin cool, particularly on the extremities; the pulse small and quick; the muscles flaccid, and the mother will tell you that about two weeks since the child was attacked with serous diarrhœa and vomiting. The latter ceased, or occurred only occasionally, after the first twenty-four hours, but the diarrhœa has continued to the present time. You will readily recognize the case as one of mild cholera infantum followed by simple diarrhœa; the discharges being thin, varying in color, sometimes green, other times yellow, and again ash-gray, and much of the time very offensive; while the unrine is generally scanty. If these symptoms were suffered to continue two or three weeks longer, the child would be reduced to a skeleton; its eyes deeply sunken; its lips pale and thin; the skin in folds or wrinkles on its neck, thighs, and arms; with a feeble pulse, and often husky voice. In this condition, the functions of digestion and assimilation are often entirely suspended, and the patient soon reaches a stage of fatal exhaustion.

The bowel-affections met with in children, every summer, may be arranged into three groups. The first or simple form of disease commences with mere looseness of the bowels, indicated by from two to six passages daily, more thin and copious than natural and varying in color from ash-gray to light yellow. It is accomdanied by vomiting only occasionally, when the stomach is made too full, and the child often continues cheerful and free from fever, though daily becoming more pale, thinner in flesh, and at times peevish. In this mild form, the disease may continue through the greater part of July and August without the occurrence of structural lesions, and gradually disappear in the early autumn, without any treatment whatever. Many other cases, however, either from a more active grade of irritation in the intestinal mucous membrane, or from a scrofulous constitutional taint, do not thus recover. On the contrary, they are found at the end of from eight to twelve weeks, pale, bloodless, emaciated to a skeleton, the pulse feeble, skin cool, abdomen tumid, appetite often voracious, and bowels morbidly loose and, generally, discharges very offensive, with appearances of undigested food.—These sumptoms indicate such a change in the mucous membrane of the ilium and the mesenteric glands, that the work of assimilation cannot be carried on, and hence most of such cases terminate fatally;. though not, in some, until several months have elapsed.

The second class of cases commence more abruptly, with active vomiting and diarrhœa. Everything that is taken into the child's stomach is quickly rejected by vomiting, often accompanied by much retching; the intestinal discharges are frequent, copious, very thin, and generally of a green or yellow color. The eyes rapidly sink in the socket, the extremities become cool, the pulse small and frequent, with paroxisms of great restlessness. In the most severe cases, the little child becomes so rapidly exhausted that complete collaps and death, sometimes, occurs in from 24 to 48 hours. In cases of less severity, after the first 12 or 18 hours, the vomiting either ceases or becomes occasional only, the intestinal discharges less frequent and copious, and a slight febrile reaction takes place; from this time on, the child continues fretful, thirsty for cold drinks, and constantly troubled with indigestion. If it takes milk or other food, much of it either sours in the stomach and is often rejected by vomiting, or it is hurried through the intestines and appears in undigested curds and masses in the stools. The latter become very variable in color, consistence and composition. In some cases, they continue very thin, green or yellow, or ash-gray, and containing only slight indications of mucus and epithelium; in others they are frothy and offensive; and in still others, they are small in quantity, consisting mostly of mucus mixed with undigested food, and variegated in color. Of course the child continues to emaciate, and often reaches a state of fatal exhaustion in from one to six weeks.

The third variety or group of cases met with in practice present dysenteric symptoms from the beginning.

They are feverish, restless, thirsty, with quick pulse, hot skin, irritable stomach, frequent small mucus discharges, sometimes mixed with blood, and accompanied by straining or tenesmus. The disease pursues the same general course as dysentery in the adult.

From these remarks, you will readily perceive that the bowel-affections of children vary much in their symptoms, their pathology, and their results. The essential pathological conditions in the first class of cases are, extreme morbid sensibility of the mucous membrane of the alimentary channel, and relaxation of the same tissue, or diminished tonicity of the capillaries. These cause increased secretion and sometimes effusion from the free surface of the mucous membrane, furnishing the increased discharges, while the function of absorption is, in the same ratio, impaired. Hence, much of the ingesta passes through mixed with the morbid secretions, instead of being appropriated as nourishment.

In the first stage of the second class of cases, the same pathological conditions of the mucous membranes exist; only in a more aggravated degree. The morbid sensibility and relaxation are such, that the resulting effusion becomes rapid and copious, as indicated by the frequent and copious discharges both up and down. This rapid effusion not only reduces the relative proportion of serous or watery element of the blood, but it also disturbs and detaches more or less of the epithelial covering of the mucous membrane. If the patient does not pass into collapse and death at this stage, congestion takes place in the denuded patches of membrane, and a low grade of inflammatory action follows, with some general febrile reaction, constituting the second stage of the attack. If not controlled, the inflammation thus begun will persist, in many cases, until ulceration and emaciation reach an extent fatal to the little sufferer.

Pathologically, the third group of cases do not differ from cases of ilio-colitis and recto-colitis, in adults. In regard to the causes of these different grades of bowel-affections, a few words are necessary.

Gentlemen, in nine cases out of ten you will be told by the mother or nurse, that the child is *teething;* and, I am sorry to add, that the same thing will be alleged by a large portion of the profession, as though the simple growth of the child's teeth, and especially their exit through the gums, was a sufficient cause of all these cases. So fixed is this notion in the minds of the people, that thousands of infants are sacrificed every year needlessly, especially among the poorer classes of society. The mother will present you her child for the first time, already emaciated to a skeleton; its eyes deeply sunken; lips thin, pale and retracted; the skin hanging in folds around its arms and legs; the pulse feeble; the bowels moving from ten to twenty times a day; with entire suspension of digestion and assimilation.

You ask how long the child has been sick; the mother will answer generally, "three or four weeks, but not to say right sick until the last few days." You ask her what she has been doing for the child all that long time and she will say, "nothing, except two or three times a dose of castor-oil." You ask why she neglected the child so long, until it is, perhaps, past recovery, and she will reply promptly, "oh! it was *teething*, and she did not think the desturbance of the stomach would signify anything."

Now, it is just this idea of the effects of teething that cause not less than 300 infants to die from neglecting these bowel-affections, in Chicago alone, every summer. And, yet, nothing is more certain, than that the growth of the teeth exerts no influence whatever, as a cause of these affections in children; as the following facts will show:

1st. The attacks occur at all periods of age, from birth to two or two and a half years: that is, before the growth of the teeth has made the slightest impression upon the gums, and after all are through that will be for some years.

2d. When an attack has commenced, neither the spontaneous exit of one or more teeth through the gum, nor the incision of the gum, affords any practical relief to the intestinal symptoms.

I must caution you against one source of error here. It often happens, that one of these little children is presented to the physician, who carefully examines and scarifies the gums, and at the same time, prescribes some appropriate medicine to allay the intestinal irritation. The child takes the medicine, becomes better, and, of course, the cutting of the gums is credited with the greater part of the resulting benefit, while, in reality, it exerted no influence whatever.

3d. I have carefully examined the mouths of several hundred infants in the first stage of bowel-affections, and have not found either redness, heat, tenderness, or any other sign of irritation in the gums, in five per cent. of the whole number.

But, gentlemen, you will be told, with great emphasis, that "it must be the teeth, for the child is constantly putting its fingers in its mouth, and is biting on everything it can get hold of." Those who make this ascertion so gravely forget that the child had been doing precisely the same thing ever since the hour of its birth; and that the act was one of the best evidences that the mouth and gums were free from soreness or morbid sensibility. No child will be found cramming its fingers into a sore mouth, or willingly biting upon a tender or sensative gum.

4th. The well known fact that the diseases in question are restricted in their prevalence to certain geographical limits, and to certain seasons of the year, totally disprove the agency of teething as an efficient cause. Of course, children "cut their teeth" as much in one country as another—as much in January as in July. In this city, for instance, there were the same ratio of children "cutting their teeth" in January last, as in the July following. Yet, in the first month named, there were scarcely more than ten deaths from bowel-complaints in young children, while in the last named month there were near three hundred.

This brings us to the real causes of these affections, namely:—high temperature, with impure air, in such localities as give a wide range of temperature between the extremes of winter and summer. In all the populous cities, and in most of the malarious country districts, in what is called the temperate zone of this continet, the first six or seven consecutive days of hot, sultry weather, occurring at the commencement of each summer, always starts the prevalence of diarrhœa and cholera-morbus among the young children. The coincidence between the high atmospheric temperature and the prevalence of bowel-complaints is so constant, from the beginning to the end of summer, that no careful observer will doubt their relation, as *cause* and *effect*. To develop a severe prevalence of this class of diseases, the high temperature must act conjointly with such atmospheric impurities as are found in all large cities and in some malarious districts.

TREATMENT.—The principles that have guided us in the treatment of the various forms of intestinal disease in children, are easily inferred from the explanations already given, concerning their pathology. In the first stage of the two first varieties described, the indications are, to allay the morbid excitability of the mucuos membrane, and to restore the proper tone or contractility to its capillary and secretory structures. At a later stage, when, from the continued drain of excessive intestinal discharges the excretory functions, especially those of the skin and kidneys, are greatly impaired or even wholly suppressed, a third indication is, to add such remedies as will aid in restoring both assimilation and secretion. In the simplest form of intestinal disease, as represented in the first class or group of cases described, the union of a simple anodyne and tonic; the one to allay the morbid excitability, and the other to improve the tonicity; fulfils the whole therapeutic indication in the early stage. A formula that I have used with much satisfaction for many years consists of:

R.	Aromat. Sulph. Acid,	drs. ij.
	Sulph. Magnesia,	drs. ij.
	Tinct. Opii,	drs. ij.
	Simple Syrup,	
	Mint Water,	aa. oz. j.

Mix.

Of this, I give, to a child six months old, 10 or 12 drops in a teaspoonful of sweetened water, every three, four, six, or eight hours, according to the frequency of the discharges, and continue their use until the discharges are reduced to one a day, and natural in appearance. If it should happen that the discharges cease altogether for twenty-four or even thirty-six hours, do not immediately administer a cathartic, and thereby undo all you have accomplished, but simply suspend the use of the restraining medicine, and wait until the bowels are moved spontaneously. If, when this takes place, the discharge is more natural and, without a tendency to frequent repetition, the further use of the drops may be restricted to one dose at night, or night and morning.

It was this prescription that I directed for the little child before you, when it was first brought to me, three days since. Its discharges are already much less frequent and more healthy, and we shall continue the remedy with the confident expectation that its recovery will be complete in three or four days more. Another formula, which I frequently use for the same purpose, is as follows:

R.	Sub. Nit. Bismuth,	30 grs.
	Pulv. Opii,	2 grs.
	White Sugar,	40 grs.

Mix. Divide into 15 powders, of which one may be given to a child one year old, every three, four, or six hours, until the discharges are reduced to their normal frequency.

Whether this or the preceding formula is used, you should inquire carefully concerning the urinary secretion, and if it is in any degree scanty, a few drops of nitrous either should be given between each of the doses of other medicine. When these cases of simple summer diarrhœa have already become chronic, with much emaciation and debility, I have often obtained the most favorable results from the use of the following:

R.	Erigeron Canadensis,	oz. ss.
	Tannate of Quinine,	20 grs.
	Sulph. Morph.,	1 gr.

Mix. Pour on it half a pint of boiling water, stir it up well while hot. When cold, give of this infusion, to a child one year old, a teaspoonful every three, four, or six hours, according to the frequency of the discharges.

In the more severe class of cases, such as described in the second groupe, constituting cholera infantum proper, if called while the vomiting and purging are still active, I generally make two prescriptions, as follows:

R.	Bicarb. Soda,	grs. ij.
	Sulph. Morph.,	1 gr.
	Aqua Menth.,	oz. ij.

Mix, and give, to a child one year old, 10 drops in a teaspoonful of sweetened water, *immediately* after every turn of vomiting; and,

R.	Hydrarg. Chlorid. Mite,	4 grs.
	Pulv. Opii,	1 gr.
	Sacchar. Alba,	20 grs.

Mix. Divide into 8 powders, and give one every three or four hours, until the discharges cease.

After the active vomiting and purging are once checked, if the discharges from the bowels continue frequent and thin, the subsequent treatment may be the same as already detailed for simple diarrhœa. But if the active stage gives place to a degree of febrile reaction accompanied by small mucous discharges, whether mixed with blood or not, then the following formula becomes far more efficient than any other that we have used:

R.	Ol. Terebinth,		drs. ij.
	Tinct. Opii,		drs. ij.
	Pulv. G. Arabic,		
	White Sugar,	aa.	drs. iij.
	Rub together and add,		
	Mint Water,		oz. ij.

Mix, and give, to a child 12 or 15 months old, 15 drops every three or four hours, until the discharges are checked, and then continue at longer intervals, until they become natural.

The third class of cases were represented to be dysenteric from the beginning, and, hence, they must be treated as such. But the clinic hour has already expired, and you must be dismissed for the present.

The Tree of Life, or Human Degeneracy.

Its Nature and Remedy, as Based on the Elevating Principle of Orthopathy. In two parts. By Isaac Jennings, M. D. New York: Miller, Wood & Co.

Dr. Jennings, although having arrived at the venerable age of four score years, does not allow himself retirement from active pursuits in his profession, but again enters upon the field of medical literature with a new work on "Human Degeneracy," treated according to the orthopathic or "upright, upward tendency of natural law," and which he reviews in both its spiritual and physical aspects. The sections devoted to the spiritual decline of man are a series of religious discussions, which we certainly should not have expected to find in a treatise designed for medical gentlemen, unless they are to serve as a stepping stone to the more purely medical part of the work. The causes, nature and remedy of the physical decline of the race, the author has made the subject of a candid but rather one-sided discussion. In his therapeutics the writer occupies a position far *advanced* to that of his profession; heretofore we have entertained some confidence in the efficacy of various remedies, such as the opiates, etc., but we are told that hygienic conditions, *bread pills* and *water variously colored*, will effect all that can be hoped for from any drug, cases being cited in which the most painful affections were cured by this bread pill practice. While we are directing attention to some of the inconsistencies of the work, we would most commend the chapters on "Alcoholic Stimulants" to the careful perusal of every reader. The character of Dr. Jennings is clearly imprinted upon this work, and no one will open its pages but be impressed with the purity and honesty of purpose of the man. The publishers have discharged their task in a mos creditable manner, the typographical execution being excellent. —*Buffalo Medical Journal.*

Boston School of Medical Specialties.

The following physicians have associated themselves for the purpose of giving instruction in their respective departments to advanced students, and to physicians who may be desirous of fitting themselves for special practice. It is thought, also, that there are some general practitioners who will be glad to refresh their memories.

This seems the first effort of the sort in this country, and is undertaken by men very widely and favorably known in their respective departments.

Henry G. Clark, M. D., (Bowdoin College) Surgeon to the Massachusetts General Hospital, Lecturer on Public Hygiene and Medical Jurisprudence.

Horatio R. Storer, M D., (Harvard University) Pupil of Simpson, of Edinburg, and Professor in the Berkshire Medical College, Lecturer on the Diseases of Women.

Prof. Storer's course, the present winter, will be upon Uterine Diagnosis; and will be exclusive of that upon the Surgical Diseases of Women, to be delivered in December.

Gustavus Hay, M. D., (Harvard University) Pupil of Arlt, of Vienna, and Surgeon to the Eye and Ear Infirmary, Lecturer on Operative Ophthalmology.

B. Joy Jeffries, M. D., (Harvard University) Pupil of Hebra, of Vienna; Lecturer in Berkshire Medical College, Surgeon to the Eye and Ear Infirmary, and Physician to the Boston Dispensary, Lecturer on the Diseases of the Skin.

Josiah H. Stickney, M. D., F. R. C. S. E., (Harvard University) Pupil of Varnell, of London, Lecturer on Veterinary Medicine and Surgery.

Thomas B. Hitchcock, M. D., (Harvard University) Lecturer on the Diseases of the Teeth.

Francis C. Ropes, M. D., F. R. C. S. E., (Harvard University) Pupil of Langenbeck, of Berlin; Physician to the Boston Dispensary, and Surgeon to Out Patients at the City Hospital, Lecturer on Surgical Deformities.

Samuel W. Langmaid, M. D., (Harvard University) Pupil of Mackenzie, of London, and Physician to the Boston Dispensary, Lecturer on Diseases of the Throat.

David L. Lincoln, M. D., (Harvard University) Pupil of Widerhofer, of Berlin, and District Physician to the Boston Dispensary, Lecturer on the Diseases of Infants and Children.

Joseph G. Pinkham, M. D., (Long Island College Hospital) Pupil of Bloxam, of London, and Professor of Chemistry in Berkshire Medical College, Lecturer on Toxicology.

Francis B. Greenough, M. D., (Harvard University) Pupil of Zeissl, of Vienna, Lecturer on Venereal Diseases.

George F. H. Markoe, Member of the American Pharmaceutical Association, Lecturer on Practical Pharmacy.

This is a move in the right direction, and we wish the enterprise success. It will relieve the medical schools of specialties, and give students and practitioners a favorable opportunity to study these diseases at their leisure, without taxing their time during the period of their primary courses.

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Facts Concerning Human Life.

The total number of human beings on the earth is computed at 1,000,000,000, (one thousand million,) and they speak 3,064 known tongues. The average duration of human life is 33½ years. One-fourth of those born die before the are seven years old, and one-half before the age of seventeen. Out of 100 persons only six reach the age of 60 years. Out of 500 persons, only one attains the age of 80 years. Sixty persons die every minute. Tall men live longer than short ones. Married men are longer lived than the single. Rich men live, on the average, 40 years, but the poor only 30 years. There is a drunkard to every 74 persons.—*Phrenological Journal.*

Symptoms and Treatment of Poison

From Toxicodendron, Poison Oak, Gift Shumach and its species, Rhus Venenata and Pumelium—Rhus Radicans, Poison Ivy, Poison Vine.

All the above are species of the Nat. Ord. Anacardiaceæ Sex, Syst. Pentandria Trigynia, and are to be found in nearly every county and district of this State. They all have in common a white, milky fluid, which, when applied to the skin, produces an erisypelatus eruption which is painful, and swells up the hands and face, sometimes closing up the eyes, and producing a frightful appearance. The white fluid sometimes turns the skin black, and is quite sticky.

We also have in this State, especially in the coast counties, the *milk weed*, swamp milk weed, and a plant that grows freely in the lower and western counties, about three feet high, and has a white corolla, and bears a capsule tripartet, with seeds about the size of a a small English pea, with fuzzy pubescent leaves, and when broken exudes a white, milky fluid which is very irritating, and even takes the hair off of horses noses, and even turns them out of all shape. It takes off the hair in spots and causes sores. When applied to the skin of a person it produces the same effect as the Rhus Toxicodendran.

Besides these there are several other vines, bushes and weeds that on being broken exude a milky fluid which produces the same effect, being more or less virulent, according to the amount found in each plant. The fluid, though found in several orders, seems to be identical, and to produce on the skin the same erisypelatus eruption. Some—as the Rhus Radicans and Rhus Smilex—are so poisonous that they affect persons through their odor while in flower, and cause a swelling of the nose and face generally; and when this inflammation once sets up it will spread to any part of the body, producing the same curious and peculiar eruption, and exuding a gummy pus.

Some families are more prone to its effects than others, but most negroes can break twigs and rub with the fluid without producing the least effect, while others dare not touch the very bush or weed without becoming sore. My family were peculiarly affected by these poisons, and I well remember seeing my brother's face swollen up until he could scarcely see from climbing up a tree in Albermale county, Virginia, where there was a vine of the Rhus Radicans, and nearly closing his eyes and swelling up his hands until he could not shut them.

I once pulled up some bushes near Belmont, in Gonzales county, of this State, believing they were hog weeds, and before I knew it I had the juice all over my face and body. This was the Rhus Smilex, which is the most poisonous to me. In a few hours it spread all over my body, and gave me intense pain. I was with a patient, sitting up at night, and it did seem as if it would kill me. I tried nitrate of potash in strong solution, cream and milk, sulphate of iron, and even sulphate of copper, and they all did not relieve me; so I returned home, and from the black spots it had produced I came to the conclusion it could be cured by an alkali. I had a bowl of common ley made from oak ashes, and strong enough to bear an egg; with this I bathed until my skin felt soapy, and then took a dose of morphine and went to sleep; when I awoke the inflammation was gone, and the eruption appeared dried up, and I was soon sound and well. For years after this my face would swell from riding through the Brazos bottom where these vines are common, and often fall across the road, and one will have to push them out of their way; by so doing the pollen will fall in the eyes and face, and produce this disease.

TREATMENT.

After the above experience, I began to cure the diseases by making a solution of caustic potash, sufficiently strong to render soapy the skin, and it has never failed to cure it immediately. I had a Mexican pony bought out of a drove, with its nose all turned to one side by this same eruption, that I washed in a solution of caustic potash and cured it very soon, and its nose became straight as ever. I have prescribed it in hundreds of cases and never knew it to fail I generally put ten grains to the ounce of water, and bathe until the part feels soapy; but sometimes this is not strong enough, and then the potash must be increased until it produces the desired effect, avoiding putting into the eyes of children or a person of delicate or soft skin. I was once called to see three white children and a negro on the San Bernard, who had wiped their faces with weed in play, and it swelled up their faces so that they could scarcely see, and even took off the skin in several places and produced running sores. I applied the above, and in a few hours they were easy, and in as many days well. I have had the weed beaten up, and applied to the skin in chronic bronchitis and consumption, but it will not always vesicate. But where it can be had fresh and applied on the breast it produces a beautiful pustulation, and you can confine it to one place by the caustic solution. In the country where it grows, and while in bloom, it may thus be made useful. I find in all these plants gutta percha, and I believe it might be obtained on the lower prairies in sufficient quantities to be used in the arts as well as from the South American and East Indian trees. These plants need close analysis, and we will be thankful for dried specimens, drawings, and a complete botanical description of all such plants as grow in our State. Who will undertake it? Let us see.

Creosote

As a Remedy for Pustulous Diseases, Ecthyma, Impetigo, Moist Tetter, Spores, Crusta Lactia, Scald-head, Foursa, Ringworm of the Scalp, Acne Rossiæ, Barber's Itch.

We have been for years using creosote in the cure of all these affections, and when properly applied it never fails to cure. When the pustules are covered with a hard crust it must be put on several times, and repeated until a cure is effected; in many instances one application is enough. Apply immediately to the eruption, and when it turns a little white then stop; wait for a few days, and if it appears to ulcerate around the part touched apply it again.

When tetter attacks the nails of the fingers or toes, put a drop or two between the nail and flesh, and one application will often cure. Where the hands are indurated and chapped apply often. It will also cure ringworm by one application, but be careful to apply it to the front of application, and wait as above stated a few days, and reapply it if necessary.

Bibleographical Notices.

"Is it I?"—We have read this little book with interest, and it is like its companion, "Why Not?" something new, and couveys many truths to a large portion of our citizens that they will not find in any other book. We advise all to read it and heed it. The author is fully up to the times if not too far ahead to be popular.

Physician's Hand Book, for 1868, by William Elmere, M. D., N. A. Townsend & Adams, publishers, New York.—This is the most complete book, of the kind, we have seen. The following are its contents:

Preface—Index to Diseases—Classification of Diseases—Ready Method in Asphyxia—Poisons and their Antedotes—Diagnostic Examination of the Urine—The Pulse, Table of, etc.—List of Incompatibles—Medical Weights and Measures—Abbreviations of Medical Properties of Remedies—Table of Signs and Abbreviations—Materia Medica—Index of Common names of Remedial Agents—Art of Writing Extemporaneous Prescriptions, Remarks and Example—Record of practice—Calendar for 1868—Names and Addresses, Bills and Accounts—Record of Practice and Treatment—Table of Signs for Daily Practice—Obstetric Record—Diagnostic Record—Obstetric Calendar—General Memoranda.

PHYSICIAN'S VISITING LIST, for 1868, Lindsay and Blackiston Philadelphia, Publishers.—A. new edition of a neat little book for the practitioner. We gave lists of contents last year. In noticing this and 'the work above and comparing them to the Physician's Daily Pocket Record of Dr. S. W. Butler, M. D.; we would say that the arrangement for accounts with the days and weeks in Lindsay & Blackinton's is the best, while the arrangement in Elmer's is the most instructive and larger. Dr. Butler's has one advantage of them all; it gives the new remedies, their price, use and doses. It also gives a synopsis of the fee bills for county and city. Now if all these could be united in one, and we think they could, of the size and length of Elmer's, we would have a complete and perfect hand-book for every physician, and espccially valuable to the young practitioner. Who will produce such a work?

TRANSACTIONS OF AMERICAN MEDICAL ASSOCIATION, for 1867, Cincinnati, Ohio. Vol. 17. Price, $5.

This volume will compare favorably with its predecessors. It has several valuable papers that will more than doubly pay for the volume.

CIRCULAR No. 5—War Department, Surgeon General's Office, Washington, May 4, 1867.—Report of Epidemic Cholera in the Army of the United States during the year 1866. This report fully substantiates the transmissibility of Cholera, and its infection, and its control by isolation and disinfection. We shall have occasion to notice the many facts set forth in this Report more fully hereafter. It is beautifully printed on quarto sheets. Thanks to the Surgeon General for this contribution.

CIRCULAR No. 6—Surgeon General's office, U. S., Washingington, November 1, 1867.—Reports on the extent and nature of the materials available for the preparation of Medical and Surgical History of the Rebellion. This is the most valuable work ever issued on Military Surgery. It is beautifully illustrated and treats upon almst every thing connected with the hygene, practice and surgery of armies. It is invaluable for its statistics.

CIRCULAR No. 7—Surgeon General's Office, U. S., Washington, July 1, 1867.—A Report on Amputations at the hip-joint, in Military Surgery. The Report is prepared by George A. Otis, Assistant Surgeon and Bret. Lieut. Col., U. S. Army, Curator of the Army Medical Mission.

Galveston Medical College.

The Regular Course of Lectures commenced on last Monday, with an introductory lecture by Prof. J. H. Webb, on the influences of Mind on Disease, after which lecture the vacant Chairs were filled by the following gentlemen:

J. BORING, M. D., PRESIDENT, Prof. of Obstetrics.
J. H. WEBB, M. D., Prof. of Materia Medica and Therapeutics.
GREENSVILLE DOWELL, M. D., Prof. of Surgery.
T. J. HEARD, M. D., Prof. of Theory and Practice of Medicine.
R. D. WEBB, M. D., Prof. of Pathology and Clinical Medicine.
F. E. DANIEL, M. D., Prof. of Anatomy.
S. M. WELCH, M. D., Prof. of Physiology.
W. D. KELLEY, M. D., Prof. of Chemistry.
W. D. JENNINGS, M. D., Prof. of Diseases of Women and Children.
C. C. FORSHEY, A. M. Prof. of Physical Sciences.
J. W. HOWELL, M. D., Demonstrator.
C. H. WILKINSON, M. D., Prosector and Curator of College.

FEES:

Tickets, Full Course	$105 00
Matriculation, ticket paid but once	5 00
Demonstrator's Ticket	10 00
Diploma	25 00

The regular course of Lectures will commence on Monday, the 2d of December, and close the 1st Wednesday in April, 1868.

GREENSVILLE DOWELL, M. D., Dean.

Profs. Webb, Dowell, Boring, Kelly, Forshey, Heard, Jennings have delivered their introductories, and this morning the hours will de filled according to the following programme, which we publish for the benefit of Physicians visiting the city, all of whom we would be pleased to see in attendance.

Goeppenger Hall is in the centre of the city, and can be easily found at night, when Prof. Forshey lectures, and his lectures are free, as all others, to Physicians and Druggists. It does not become us to speak of ourselves, but we promise to give entire satisfaction, and that our course will be as thorough as any school in the United States. The City Hospital affords abundance of clinical subjects, and every disease can be seen there. It is open at all times to students and physicians, and the clinical lectures will be thorough, and delivered by the Professors alternately. Prof. Forshey's lectures are much esteemed, as they embrace subjects that are little taught in our State, and of great interest to all medical men.

Galveston Medical Journal.

We hope our patrons will not fail to comply with the request we made in our last, to correct and add to the List of Physicians sent; and, if possible, send us a few new subscribers, and remittances for old dues. Christmas is coming, and we want to improve, and thus show that we are both learners and teachers. Help us with your talents and your money. We have many difficulties to contend with which you know not of, therefore, we bespeak indulgence. We are not discouraged, though one long-eared animal writes—"Keep your Journal until you can do better!" But thanks to an editor of a journal for the following: "The GALVESTON JOURNAL continues to improve. Every number has something new in it." This comes from one who has written a series of Text Books, and we take it as a compliment. We receive encouragement by every mail, and this year we have published quite a number of articles from Texas Physicians, but we are sorry to say that some perfer going from home. Indeed, "a prophet hath honor, save in his own country."

DIED,

At the Island City Hospital, Galveston, Texas, of yellow fever, on the 5th of September, 1867, Dr. ROBERT H. HANNA, in the 24th year of his age.

IN MEMORIAM.

The deceased member of the Medical Profession was born in Louisiana, wherefrom he emigrated, at an early period of his life, with his father's family, to Brazoria and afterwards to Washington county, Texas In 1859, his father died, leaving him sole supporter of a large family and heir to the talented and gifted qualities that had characterized him as a practitioner of medicine.

The out-break of the late sad war found him but a youthful adventurer on the road to fame; but he joined the Western army, participated in its perilous campaigns in Arkansas and Missouri, and after the surrender, resumed the pursuit of those studies which he had laid aside during its existence. Among the first, we find his name on the list of graduates in the Galveston Medical College, for 1865 and '66. It was during this collegiate course, that those bright qualities of mind and soul began to emanate, that afterwards characterized his life; and at the close of the session, so prominently did he stand in the estimation of his associates and Professors, on account of his brilliant display of intellect, that the Degree of Medicine was awarded him without the accustomed formal examination.

From the lecture room he was immediately thrust upon the busy stage of his professional life, being awarded, as a mark of distinction and regard, the position of House Surgeon in the Island City Hospital. During the year that he devoted to his profession, in this institution, he not only signalized himself by his rapid and brilliant ascension in the science of medicine, but moulded friends from all the material that he there encountered, and won love, friendship and respect that followed him through his illness to his grave. During the session of '66 and '67 he was selected by the Faculty of the Galveston Medical College, as Demonstrator of Anatomy—a position which he filled with honor to himself and satisfaction to his class.

In the spring of the past year he entered the broad arena of life as a practitioner in this city, ever winning love, confidence and respect, and when the late epidemic burst, with all its fury on the citizens of Galveston, true to his nature, he sprang to his post, there to brave the fierce monster until called away by death. Upon the reorganization of that body, he offered his services to the Howard Association, which were cordially accepted, and he remained in their employment until his death. On the 29th of August, in the acme of the epidemic, already fatigued and exhausted by previous exertions—while yet administering to the sick—he received the blow from which he never rallied. All aid and attention—the kindness of friends and the skill of the profession were exhausted for nothing; all combined, had not the slightest effect in warding off the lowering shadow; and calmly and quietly life ebbed lower and lower until he passed away into that sad, deep slumber that only wakens in eternity.

As a professional man, ROBT. H. HANNA possessed qualities of mind that not only exacted the admiration of all who knew him, but which ever elicited surprise at the brilliant endowments that constituted them.

As a gentleman, his character stands unimpeached by all whoever knew him. Pure and magnanimous he left no blot upon the tablets of of his heart, but a name unsullied by any single action.

Full of nobleness and amiability—full of generosity and affection—full of talent, hope and life—he soon became a shining mark for the unerring arrow and a beconing subject for a better land. Gifted with a penetrating intellect, and filled with sentiments of the ideal and the beautiful, he was ever wont to penetrate the deep, dark mysteries of the future, and even search beyond the grave. Over his grve, the tears of mother and sisters now fall, bereft of a noble son and tender brother—around his tomb the hearts of hundreds roam in silent sadness—for he has passed to that mysterious land where all is obscurity, and whence no traveler e'er returns.

"If any born of kindlier blood,
Should ask, what spirit sleeps below?
Say only this; a tender bud,
That tried to blossom in Life's snow,
Now withers where the violets blow."

W.

List of Exchanges.

The Richmond Medical Journal, November, 1867.
The St. Louis Medical Reporter, November 1st and 15th.
The St. Louis Medical and Surgical Journal, November.
The [illegible] Medical Archives, St. Louis, November, Nos. 1, 2, 3.
American Journal of Medical Sciences, Philadelphia, October.
University Journal of Medicine and Surgery, Pa., November.
The Dental Cosmos, Pa., November.
The American Journal of Pharmacy, Pa.
The New York Medical Record, November 1st and 15th.
The Herald of Health and Journal of Physical Culture, New York.
Eclectic Medical Journal, New York, November.
The American Journal of Insanity, New York, November.
The New York Medical Journal, New York, November.
The Scientific American, New York.
The Druggist's Circular and Chemical Gazette, New York, November.
Harper's New Monthly Magazine.
The Buffalo Medical and Surgical Journal, Buffalo, November.
Journal of Materia Medica, New Lebanon, N. Y., November.
The New Orleans Medical and Surgical Journal, Nov. } These are now united in one and
Southern Journal of Medical Sciences, N. O., Nov. } called N. O. Journal of Medicine.
The Chicago Medical Examiner, November.
The Chicago Medical Journal, November.
The Eclectic Medical Journal of Cincinnati.
The Dental Register, Baltimore, Nos. 1 and 2.
The Cincinnati Lancet and Observer, Cincinnati.
The Nashville Journal of Medicine and Surgery, November.
The Gospel Advocate, Nashville, Nos. 1 to 18.
The Pacific Medical and Surgical Journal, November.
The Detroit Review of Medicine and Pharmacy, November.
The Leavenworth Medical Herald, Kansas.
The Quarterly Journal of Psycological Medicine and Medical Jurisprudence.
Medical Gazette, (weekly,) New York, Nos. 1, 2, 3, 7, 8.
The American Journal of Science and Arts.
The American Naturalist, Nos. 1 and 2.
Phrenological Journal, S. R. Wells, New York, Navember and December, $3.
The Indiana Annals of Medical Sciences.
The Medical Mirror.
The Medical Press and Circular.
The Canada Medical Journal.
The Western Journal of Medicine, November.
The Medical and Surgical Reporter, Nos. 14, 15, 16, 17, 18.
The Atlanta Medical and Surgical Journal, Atlanta, Georgia.
The Southern Medical and Surgical Journal, Augusta, Georgia.
The Oregon Sentinel, Jacksonville, not received.
The Pacific Medical and Surgical Journal, San Francisco, November.
The American Homeopathic Observer, Detroit, November.
The Western Homeopathic Observer, St. Louis.

FOREIGN.

The Retrospect of Medicine, (Braithwaite,) Townsend & Co.
The Doublin Quarterly Journal of Medical Sciences.
The Edinburg Medical Journal.
The Journal of Cutaneous Medicine and Diseases of the Skin.
Gazeta Medico de Lisbon, Portugal.
Gazeta Medico de Bohio, Brazil, South America.
Gazeta Medico de Vaneto del Itale.
Gagettee Assoziozins Medico Lombardian States.
A Seglo Medico, Madrid, Espaniola.
Annali Universati di Medicini, Milano, Itale.
Constatts Jaberestbircht, Wursburg, Allemand, 1, 2, 3, 4, 5, Bond. 1865, Bond IV, VII.
Zeitchrift fur Practische Hilkunde, Wein Allemand, Bond 1, 3, 5, January to November Nos.
Schmidts Jahrbischer, Gessamenten Medicio, Lepzig Allemand, Bond 1, 2, 4; Heft, 1, 2, 3, 4, 5, 6, and 1867, Bond 1, 3, 5; Heft 1, 2, 3, 4, 5.

HENRY HINCK,

STATIONER,

SIGN OF THE "GILT PEN,"

22d STREET - - - - GALVESTON, TEXAS.

PROTECT YOUR LIVES AND PROPERTY

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PROF. HALL'S COPPER SCROLL LIGHTNING ROD.

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All scientific persons are invited to examine it, and for themselves decide upon its merit.

It requires no insulation—will not rust or corrode, and has eight times the conducting power of iron with the same surface.

Reliable agents wanted to canvass the State.

J. S. TRIPLETT & CO.,
Office Mills' Building, Galveston, Texas.

GALVESTON, June 7, 1867.

The undersigned have made an examination of the Challenge Copper Scroll Lightning Rod, patented by Prof. Hall and introduced into Texas by John S. Triplett, Esq., General Agent.

We find the claims of the Patentee based upon the principles of true science and experience, and we take pleasure in commending it to the confidence and patronage of our people, as incomparably the best means of security against the ravages of lightning that has ever come under our knowledge or observation: C. G. Forshey & Co., consulting engineers, Strand, Galveston; Greensville Dowell, M. D., Professor of Anatomy and Editor Galveston Medical Journal; Tipton Walker, Civil Engineer; C. G. Young, M. D., and President Houston and G. N. R.R. Co.; W. W. Martin, Supt. Public Buildings.

It has also the endorsement of the following underwriters and insurance agents, viz; James Sorley, Agent Underwriters' Agency New York; E. P. Hunt, Insurance Agent; J. S. Sellers, President Merchants' Mutual Insurance Co.; D. F. Holland, General Insurance Agent.

GALVESTON MEDICAL COLLEGE

For the Session of 1867-8.

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J. C. WALLIS,
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JORDAN HILL.

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J. W. Howeel, M. D., *Demonstrator.*
C. H. Wilkinson, M. D., *Prosector and Curator of College.*

THE REGULAR COURSE OF LECTURES

will begin on the First Monday in DECEMBER, 1867, and close on the First Wednesday of APRIL, 1868.

GREENSVILLE DOWELL, M. D., *Dean.*

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will begin on the First Monday in DECEMBER, 1867, and close on the First Wednesday of APRIL, 1868.

GREENSVILLE DOWELL, M. D., *Dean.*

FEES.

Tickets, Full Course,	$105 00
Matriculation, once	5 00
Demonstrator's Ticket	10 00
Diploma	25 00

◆

FREE LIST.

In consideaation of the impoverished condition of the country, many worthy indigent Students can not support the expense of a Medical Education, therefore, it is

Resolved,—That a Student from each Judicial District in the State, be admitted free of cost for the Regular Tickets and requisites for admission. The applicant shall have a good education, and shall have been under the private instruction of some respectable Physician at least one year; be of good moral character and steady habits, and without the means of payment of the fees for the course.

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APPOINTMENT.

The District Judge in each District is empowered to nominate such candidate, based entirely upon the highest mental and moral claims. Preference will be given to those laboring under physical disability to engage in the mechanical and agricultural pursuits.

G. A. BEHRMAN,
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